Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	553	(estrodiol or estrogen) same (bind or bound) same (DNA or nucleic)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2005/06/08 15:28
L2	63	(estrodiol or estrogen) near5 (bind or bound) near8 (DNA or nucleic)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2005/06/08 15:28
L3	59	l2 and @py<"2004"	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2005/06/08 15:54
L4	15287	(435/6).CCLS.	USPAT; EPO	OR	OFF	2005/06/08 15:55
L5	64	l1 and l4	USPAT; EPO	OR	OFF	2005/06/08 15:55
L6	8	l1 same (compet? or replac? or displac? or dissociat?)	USPAT; EPO	OR	OFF	2005/06/08 15:56
L7	0	l5 and "l8"	USPAT; EPO	OR	OFF	2005/06/08 15:56

FILE 'MEDICONF' ENTERED AT 13:02:57 ON 08 JUN 2005

FILE 'PASCAL' ENTERED AT 13:02:57 ON 08 JUN 2005

=> (screen or detect or determine) and (toxicant or pollutant or pesticide or contaminant) and (DNA-protein)
L29 0 FILE AGRICOLA
L30 1 FILE BIOTECHNO
L31 0 FILE CONFSCI
L32 0 FILE HEALSAFE
L33 0 FILE IMSDRUGCONF
L34 1 FILE LIFESCI
L35 0 FILE MEDICONF
L36 0 FILE PASCAL

TOTAL FOR ALL FILES
L37 2 (SCREEN OR DETECT OR DETERMINE) AND (TOXICANT OR POLLUTANT OR PESTICIDE OR CONTAMINANT) AND (DNA-PROTEIN)

=> d l37 ibib abs total

L37 ANSWER 1 OF 2 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1990:20105569 BIOTECHNO
TITLE: The detection of **DNA-protein** complexes in vitro by an immunological assay
AUTHOR: Cosma G.N.; Miller III C.A.; Costa M.
CORPORATE SOURCE: Institute of Environmental Medicine, New York University Medical Center, Long Meadow Road, Tuxedo, NY 10987, United States.
SOURCE: Toxicology in Vitro, (1990), 4/1 (17-22)
CODEN: TIVIEQ ISSN: 0887-2333
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1990:20105569 BIOTECHNO
AB We have developed an immunological assay to **detect DNA -protein** complexes (DPCs) in cell cultures treated with environmental **toxicants**. The assay uses an antiserum developed against K.sub.2CrO.sub.4-induced DPCs, which recognizes an acidic protein with a molecular weight of 95 kDaltons. The method uses a filter-binding assay to trap the DPCs from SDS-lysed cell cultures on polycarbonate filters, after which they are immunologically probed with the DPC antiserum. Cultures of Chinese hamster ovary cells were treated with K.sub.2CrO.sub.4, formaldehyde or UV irradiation. DPCs were detected immunologically in cells treated with K.sub.2CrO.sub.4 or UV irradiation, but not in those treated with formaldehyde. These results were similar to those obtained when DPCs were detected by filter-binding assay using radiolabelled cell cultures to measure the adherence of protein and DNA to the filters. In addition, both methods gave analogous dose responses of DPC formation in K.sub.2CrO.sub.4-treated cells. This novel immunological assay for detecting DNA lesions allows the rapid analysis of samples, which do not need to be radiolabelled, and thus it may have an application as a non-invasive test to **screen** for **DNA -protein** complexes.

L37 ANSWER 2 OF 2 LIFESCI COPYRIGHT 2005 CSA on STN

ACCESSION NUMBER: 90:11066 LIFESCI
TITLE: The detection of **DNA-protein** complexes in vitro by an immunological assay.
AUTHOR: Cosma, G.N.; Miller, C.A.,III; Costa, M.
CORPORATE SOURCE: Inst. Environ. Med., New York Univ. Med. Cent., P.O. Box 817, Long Meadow Rd., Tuxedo, NY 10987, USA
SOURCE: TOXICOL. IN VITRO., (1990) vol. 4, no. 1, pp. 17-22.
DOCUMENT TYPE: Journal
FILE SEGMENT: X; W
LANGUAGE: English
SUMMARY LANGUAGE: English

AB We have developed an immunological assay to **detect DNA -protein** complexes (DPCs) in cell cultures treated with environmental **toxicants**. The assay uses an antiserum developed against K sub(2)CrO sub(4)-induced DPCs, which recognizes an acidic protein with a molecular weight of 95 kDaltons. The method uses a filter-binding assay to trap the DPCs from SDS-lysed cell cultures on polycarbonate filters, after which they are immunologically probed with the DPC antiserum. Cultures of Chinese hamster ovary cells were treated with K sub(2)CrO sub(4), formaldehyde or UV irradiation. DPCs were detected immunologically in cells treated with K sub(2)CrO sub(4) or UV irradiation, but not in those treated with formaldehyde. These results were similar to those obtained when DPCs were detected by filter-binding assay using radiolabelled cell cultures to measure the adherence of protein and DNA to the filters. Both methods gave analogous dose responses of DPC formation in K sub(2)CrO sub(4)-treated cells.

=> (DNA or nucleic(3A)(protein or antibody)) and (metal or pollutant or contaminant or pesticide)
L38 807 FILE AGRICOLA
L39 4180 FILE BIOTECHNO
L40 85 FILE CONFSCI
L41 204 FILE HEALSAFE
L42 0 FILE IMSDRUGCONF
L43 4493 FILE LIFESCI
L44 16 FILE MEDICONF
L45 4981 FILE PASCAL

TOTAL FOR ALL FILES
L46 14766 (DNA OR NUCLEIC(3A)(PROTEIN OR ANTIBODY)) AND (METAL OR POLLUTANT OR CONTAMINANT OR PESTICIDE)

=> ((DNA or nucleic)(3A)(protein or antibody)) and (metal or pollutant or contaminant or pesticide)
L47 88 FILE AGRICOLA
L48 637 FILE BIOTECHNO
L49 3 FILE CONFSCI
L50 18 FILE HEALSAFE
L51 0 FILE IMSDRUGCONF
L52 596 FILE LIFESCI
L53 0 FILE MEDICONF
L54 443 FILE PASCAL

TOTAL FOR ALL FILES
L55 1785 ((DNA OR NUCLEIC)(3A)(PROTEIN OR ANTIBODY)) AND (METAL OR POLLUTANT OR CONTAMINANT OR PESTICIDE)

=> ((DNA or nucleic)(3A)(protein or antibody)) and (metal or pollutant or contaminant or pesticide) and immunoassay
L56 0 FILE AGRICOLA
L57 11 FILE BIOTECHNO
L58 0 FILE CONFSCI

```
L59           2 FILE HEALSAFE
L60           0 FILE IMSDRUGCONF
L61           4 FILE LIFESCI
L62           0 FILE MEDICONF
L63          12 FILE PASCAL

TOTAL FOR ALL FILES
L64          29 ((DNA OR NUCLEIC)(3A)(PROTEIN OR ANTIBODY)) AND (METAL OR POLLUT
                ANT OR CONTAMINANT OR PESTICIDE) AND IMMUNOASSAY

=> dup rem
ENTER L# LIST OR (END):l64
DUPLICATE IS NOT AVAILABLE IN 'IMSDRUGCONF, MEDICONF'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L64
L65           22 DUP REM L64 (7 DUPLICATES REMOVED)

=> d l65 ibib abs total

L65   ANSWER 1 OF 22  PASCAL  COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED.
      on STN
ACCESSION NUMBER:          2004-0404145   PASCAL
COPYRIGHT NOTICE:          Copyright .COPYRGT. 2004 INIST-CNRS. All rights
                           reserved.
TITLE (IN ENGLISH):        Trends in detecting food allergens
AUTHOR:                    POMS Roland Ernest; ANKLAM Elke
CORPORATE SOURCE:          European Commission, Joint Research Centre Institute
                           for Reference Materials and Measurements (IRMM)
                           Retieseweg, 2440 Geel, Belgium
SOURCE:                    GIT laboratory journal Europe, (2004), 8(1), 43-46
                           ISSN: 1611-6038
DOCUMENT TYPE:             Journal
BIBLIOGRAPHIC LEVEL:       Analytic
COUNTRY:                   Germany, Federal Republic of
LANGUAGE:                  English
AVAILABILITY:              INIST-2733A, 354000116482690070
AN    2004-0404145   PASCAL
CP    Copyright .COPYRGT. 2004 INIST-CNRS. All rights reserved.
AB    Food allergies represent an important health problem in industrialised
      countries. Undeclared allergens as contaminants in food
      products pose a major risk for sensitised persons. A proposal to amend
      the European Food Labelling Directive imposes that all ingredients
      intentionally added to food products will have to be included on the
      label. Reliable detection and quantification methods for food allergens
      are necessary in order to ensure compliance with food labelling and to
      improve consumer protection. However, the detection of allergens in food
      products can be very difficult, as they are present often in trace
      amounts only or are masked by the food matrix. There is general agreement
      that the detection limits for different food allergens need to be between
      1 and 100 ppm depending on the respective food. Methods available so far
      are based on protein- or DNA-detection. Commercially
      available test kits for rapid screening are mostly based on protein
      analysis enzyme linked immunosorbent assay(ELIZA).

L65   ANSWER 2 OF 22  PASCAL  COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED.
      on STN
ACCESSION NUMBER:          2004-0148227   PASCAL
COPYRIGHT NOTICE:          Copyright .COPYRGT. 2004 INIST-CNRS. All rights
                           reserved.
TITLE (IN ENGLISH):        Methods for allergen analysis in food: a review
AUTHOR:                    POMS R. E.; KLEIN C. L.; ANKLAM E.
CORPORATE SOURCE:          European Commission, DG Joint Research Centre,
                           Institute for Reference Materials and Measurements,
```

Retleseweg, 2440 Geel, Belgium
SOURCE: Food additives and contaminants, (2004), 21(1), 1-31, refs. 7 p.1/4
ISSN: 0265-203X CODEN: FACOEB
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United Kingdom
LANGUAGE: English
AVAILABILITY: INIST-20834, 354000116435590010
AN 2004-0148227 PASCAL

AB Food allergies represent an important health problem in industrialized countries. Undeclared allergens as **contaminants** in food products pose a major risk for sensitized persons. A proposal to amend the European Food Labelling Directive requires that all ingredients intentionally added to food products will have to be included on the label. Reliable detection and quantification methods for food allergens are necessary to ensure compliance with food labelling and to improve consumer protection. Methods available so far are based on **protein** or **DNA** detection. This review presents an up-to-date picture of the characteristics of the major food allergens and collects published methods for the determination of food allergens or the presence of potentially allergenic constituents in food products. A summary of the current availability of commercial allergen detection kits is given. One part of the paper describes various methods that have been generally employed in the detection of allergens in food; their advantages and drawbacks are discussed in brief. The main part of this review, however, focuses on specific food allergens and appropriate methods for their detection in food products. Special emphasis is given to allergenic foods explicitly mentioned in the Amendment to the European Food Labelling Directive that pose a potential risk for allergic individuals, namely celery, cereals containing gluten (including wheat, rye and barley) crustaceans, eggs, fish, peanuts, soybeans, milk and dairy products, mustard, tree-nuts, sesame seeds, and sulphite at concentrations of at least 10 mg kg.sup.-.sup.1. Sulphites, however, are not discussed.

L65 ANSWER 3 OF 22 PASCAL
on STN
ACCESSION NUMBER: 2003-0357696 PASCAL

TITLE (IN ENGLISH): Determining whether transgenic and endogenous plant **DNA** and transgenic **protein** are detectable in muscle from swine fed Roundup Ready soybean meal
AUTHOR: JENNINGS J. C.; KOLWYCK D. C.; KAYS S. B.; WHETSELL A. J.; SURBER J. B.; CROMWELL G. L.; LIRETTE R. P.; GLENN K. C.
CORPORATE SOURCE: Monsanto Company, Chesterfield, MO 63017, United States; University of Kentucky, Lexington, KY 40546, United States
SOURCE: Journal of animal science, (2003), 81(6), 1447-1455, 20 refs.
ISSN: 0021-8812
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United States
LANGUAGE: English
AVAILABILITY: INIST-3247, 354000119837990120
AN 2003-0357696 PASCAL

AB Questions regarding the digestive fate of **DNA** and

protein from transgenic feed have been raised in regard to human consumption and commercial trade of animal products (e.g., meat, milk, and eggs) from farm animals fed transgenic crops. Using highly sensitive, well-characterized analytical methods, pork loin samples were analyzed for the presence of fragments of transgenic and endogenous plant **DNA** and transgenic **protein** from animals fed meal prepared from conventional or glyphosate-tolerant Roundup Ready (RR) soybeans. Pigs were fed diets containing 24, 19, and 14% RR or conventional soybean meal during grower, early-finisher, and late-finisher phases of growth, respectively, and longissimus muscle samples were collected (12 per treatment) after slaughter. Total DNA was extracted from the samples and analyzed by PCR, followed by Southern blot hybridization for the presence of a 272-bp fragment of the cp4 epsps coding region (encoding the synthetic enzyme 5-enolpyruvylshikimate-3-phosphate synthase derived from Agrobacterium sp. strain CP4) and a 198-bp fragment of the endogenous soybean gene lel (encoding soy lectin). Using 1 μg of input DNA per reaction, none of the extracted samples was positive for cp4 epsps or lel at the limit of detection (LOD) for these PCR/Southern blot assays. The LOD for these assays was shown to be approximately one diploid genome equivalent of RR soybean DNA, even in the presence of 10 μg of pork genomic DNA. A 185-bp fragment of the porcine preprolactin (prl) gene, used as a positive control, was amplified from all samples showing that the DNA preparations were amenable to PCR amplification. Using a competitive **immunoassay** with an LOD of approximately 94 ng of CP4 EPSPS protein/g of pork muscle, neither the CP4 EPSPS protein nor the immunoreactive peptide fragments were detected in loin muscle homogenates from pigs fed RR soybean meal. Taken together, these results show that neither small fragments of transgenic DNA nor immunoreactive fragments of transgenic protein are detectable in loin muscle samples from pigs fed a diet containing RR soybean meal.

L65 ANSWER 4 OF 22 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
DUPLICATE

ACCESSION NUMBER: 2003:37155929 BIOTECHNO
TITLE: Emerging trends in the synthesis and improvement of hapten-specific recombinant antibodies
AUTHOR: Yau K.Y.F.; Lee H.; Hall J.C.
CORPORATE SOURCE: H. Lee, Department of Environmental Biology, University of Guelph, Guelph, Ont. N1G 2W1, Canada. E-mail: hlee@uoguelph.ca
SOURCE: Biotechnology Advances, (2003), 21/7 (599-637), 241 reference(s)
CODEN: BIADDD ISSN: 0734-9750
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English

AN 2003:37155929 BIOTECHNO

AB A key requirement for successful immunotherapeutic and immunodiagnostic applications is the availability of antibodies with high affinity and specificity. In the past, polyclonal antibodies from hyperimmunized animals or monoclonal antibodies from hybridoma cell lines were used extensively and profitably in medicine and immunotechnology. Antibody-based diagnostics, such as **immunoassays**, are also widely accepted because of their high sensitivity and ease of use as compared to conventional chromatographic techniques. While **immunoassays** have been used to monitor organic chemical **contaminants** such as **pesticides**, food preservatives, antibiotics in agricultural and food industries, hapten-specific antibodies with the desired affinity and specificity are generally difficult to obtain. With the advent of recombinant **DNA** technology, **antibody** genes can be amplified and selected

through phage display, cell surface display, or cell-free display systems. A particularly useful feature common to all these display systems is the linking of the phenotype and genotype of antibodies during selection. This allows easy co-selection of the desired antibodies and their encoding genes based on the binding characteristics of the displayed **antibodies**. The selected **antibody DNA** can be further manipulated for high-level expression, post-translation modification, and/or affinity and specificity improvement to suit their particular applications. Several hapten-specific antibodies, which were successfully selected and engineered to high specificity and affinity using display technologies, have been found to be amenable to conventional **immunoassay** development. In this review, we will examine different formats of **immunoassays** designed for hapten identification and various display technologies available for antibody selection and improvement.

L65 ANSWER 5 OF 22 PASCAL
on STN

ACCESSION NUMBER: 2003-0294368 PASCAL
COPYRIGHT NOTICE:
TITLE (IN ENGLISH): Novel monoclonal **antibody** recognition of oxidative **DNA** damage adduct, deoxycytidine-glyoxal
AUTHOR: MISTRY Nalini; PODMORE Ian; COOKE Marcus; BUTLER Paul; GRIFFITHS Helen; HERBERT Karl; LUNEC Joseph
CORPORATE SOURCE: Oxidative Stress Group, Department of Clinical Biochemistry, Leicester Royal Infirmary, University Hospitals of Leicester National Heath Service Trust, Leicester, United Kingdom; Department of Chemistry, School of Sciences, University of Salford, Salford, United Kingdom; Cancer Research Group, DeMontfort University, Leicester, United Kingdom; Pharmaceutical Sciences Research Institute, Aston University, Aston Triangle, Birmingham, United Kingdom; Department of Pathology, Leicester Royal Infirmary, University Hospitals of Leicester National Heath Service Trust, Leicester, United Kingdom
SOURCE: Laboratory investigation, (2003), 83(2), 241-250, refs. 1 p.1/4
ISSN: 0023-6837 CODEN: LAINAW
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United States
LANGUAGE: English
AVAILABILITY: INIST-8078, 354000104228490090
AN 2003-0294368 PASCAL
CP
AB Glyoxal, a reactive aldehyde, is a decomposition product of lipid hydroperoxides, oxidative deoxyribose breakdown, or autoxidation of sugars, such as glucose. It readily forms DNA adducts, generating potential carcinogens such as glyoxalated deoxycytidine (gdC). A major drawback in assessing gdC formation in cellular DNA has been methodologic sensitivity. We have developed an mAb that specifically recognizes gdc. Balb/c mice were immunized with DNA, oxidatively modified by UVC/hydrogen peroxide in the presence of endogenous **metal** ions. Although UVC is not normally considered an oxidizing agent, a UVC/hydrogen peroxide combination may lead to glyoxalated bases arising from hydroxyl radical damage to deoxyribose. This damaging system was used to induce numerous oxidative lesions including glyoxal DNA modifications, from which resulted a number of clones. Clone F3/9/H2/G5 showed increased reactivity toward glyoxal-modified DNA greater than that of the immunizing antigen.

ELISA unequivocally showed Ab recognition toward gdC, which was confirmed by gas chromatography-mass spectrometry of the derivatized adduct after formic acid hydrolysis to the modified base. Binding of Ab F3/9 with glyoxalated and untreated oligomers containing deoxycytidine, deoxyguanosine, thymidine, and deoxyadenosine assessed by ELISA produced significant recognition ($p > 0.0001$) of glyoxal-modified deoxycytidine greater than that of untreated oligomer. Additionally, inhibition ELISA studies using the glyoxalated and native deoxycytidine oligomer showed increased recognition for gdC with more than a 5-fold difference in IC.sub.5.sub.0 values. DNA modified with increasing levels of iron (II)/EDTA produced a dose-dependent increase in Ab F3/9 binding. This was reduced in the presence of catalase or aminoguanidine. We have validated the potential of gdC as a marker of oxidative DNA damage and showed negligible cross-reactivity with 8-oxo-2'-deoxyguanosine or malondialdehyde-modified DNA as well as its utility in immunocytochemistry. Formation of the gdC adduct may involve intermediate structures; however, our results strongly suggest Ab F3/9 has major specificity for the predominant product, 5-hydroxyacetyl-dC.

L65 ANSWER 6 OF 22 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2002-0533433 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2002 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Immunochemical analysis of water **pollutants**
TITLE (IN GERMAN): Fortschritte In der Immunchemischen Analytik von gewaesserrelevanten Schadstoffen
AUTHOR: HOCK Bertold
CORPORATE SOURCE: Technische Universitaet Muenchen, Wissenschaftszentrum Weihenstephan, Lehrstuhl fuer Zellbiologie, Alte Akademie 12, 85350 Freising, Germany, Federal Republic of
SOURCE: Acta hydrochimica et hydrobiologica, (2002), 29(6-7), 375-390, 29 refs.
ISSN: 0323-4320 CODEN: AHCBAU
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Germany, Federal Republic of
LANGUAGE: German
SUMMARY LANGUAGE: English
AVAILABILITY: INIST-16925, 354000101881920030

AN 2002-0533433 PASCAL
CP Copyright .COPYRGT. 2002 INIST-CNRS. All rights reserved.
AB Up to now, **immunoassays** play a major role among immunochemical methods for water analysis. Further developments are focussed at the reduction of time required for analysis, automation, and multianalyte approaches. Important progress has been achieved in flow injection immunoanalysis, immunosensing, and array technologies. The advantages of these methodologies are mainly seen in those applications, which keep the efforts for sample preparation to a minimum. In spite of the achieved progress, especially with respect to assay sensitivities, the availability of suitable antibodies is still considered the limiting factor for the application of immunochemical methods in water analysis. The hybridoma technology has provided the basis for the production of unlimited amounts of monoclonal antibodies, i.e., homogeneous antibody preparations of unchanging quality. However, the production of new monoclonal antibodies still requires new immunisations and new animals. Only recombinant technologies offer the potential not only for inexpensive mass production, but also for the alteration of given **antibody** properties at the **DNA** level. The immune system with its possibilities for affinity maturation and diversification of antibodies is used as a model for the production of new or improved antibody properties. Antibody libraries, which represent the immune

repertoire in vitro, provide the basis for the selection of suitable variants and further optimisation in subsequent diversification and selection steps. Examples are given for **immunoassays** with recombinant fusion proteins and Fabs for the analysis of herbizides in water.

L65 ANSWER 7 OF 22 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2002-0520864 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2002 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Fluorescent lanthanide chelates for biological systems IUPAC 8th international symposium on macromolecule - **metal** complexes (MMC-9 Brooklyn) : New York NY, 19-23 August 2001
AUTHOR: MATSUMOTO Kazuko; NOJIMA Takahiko; SANO Hiroki; MAJIMA Keisuke
LEVON Kalle (ed.); GUISEPPI-ELIE Anthony (ed.)
CORPORATE SOURCE: Department of Chemistry, Waseda University, Tokyo 169-8555, Japan; Advanced Research Institute for Science and Engineering, Waseda University, Tokyo 169-8555, Japan; CREST, Japan Science and Technology Corporation (JST), Japan
SOURCE: Makromolekulare Chemie (Die). Macromolecular symposia; (2002), 186, 117-121, 3 refs.
Conference: 8 International symposium on macromolecule-metal complexes, New York NY (United States), 19 Aug 2001
ISSN: 0258-0322
ISBN: 3-527-30476-2
DOCUMENT TYPE: Journal; Conference
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Switzerland
LANGUAGE: English
AVAILABILITY: INIST-4111 S, 354000108429390180
AN 2002-0520864 PASCAL
CP Copyright .COPYRGT. 2002 INIST-CNRS. All rights reserved.
AB Certain lanthanide chelate complexes are known to emit strong fluorescence with very distinct physical properties that are different from those of organic fluorescent compounds: the fluorescence of lanthanide complexes is long-lived with the half decay-time of several hundreds microseconds to 2 ms. The complexes are excited by UV light and emit fluorescence in the visible region. The emission profile is very sharp and the wavelength is specific to each **metal**, for instance, Eu.sup.3.sup.+ complexes emit at 615 nm and Tb.sup.3.sup.+ at 545 nm regardless of the ligand. These properties show that the complexes can be excellent fluorescence labels for **proteins** and **DNAs** and, when time-resolved fluorometry is employed, provide highly sensitive detection methods in biotechnology. Among many labels we have developed, BHHCT-Eu.sup.3.sup.+ and BPTA-Tb.sup.3.sup.+ are suitable for **immunoassay**, DNA hybridization assay, and DNA chip technology. Homogeneous DNA hybridization assay systems using fluorescence resonance energy transfer and fluorescence intercalators will be introduced.

L65 ANSWER 8 OF 22 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN

ACCESSION NUMBER: 2002:35256477 BIOTECHNO
TITLE: Applications of ink-jet printing technology to BioMEMS and microfluidic systems
AUTHOR: Cooley P.; Wallace D.; Antohe B.
CORPORATE SOURCE: P. Cooley, MicroFab Technologies Inc., 1104 Summit Avenue, Plano, TX 75074, United States.
E-mail: pcooley@microfab.com

SOURCE: JALA - Journal of the Association for Laboratory Automation, (2002), 7/5 (33-39), 36 reference(s)
CODEN: JALLFO ISSN: 1535-5535
DOCUMENT TYPE: Journal; General Review
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 2002:35256477 BIOTECHNO
AB Applications of microfluidics and MEMS (micro-electromechanical systems) technology are emerging in many areas of biological and life sciences. Non-contact microdispensing systems for accurate, high-throughput deposition of bioactive fluids can be an enabling technology for these applications. In addition to bioactive fluid dispensing, ink-jet based microdispensing allows integration of features (electronic, photonic, sensing, structural, etc.) that are not possible, or very difficult, with traditional photolithographic-based MEMS fabrication methods. Our single fluid and multifluid (MatrixJet.TM.) piezoelectric microdispensers have been used for spot synthesis of peptides, production of microspheres to deliver drugs/biological materials, microprinting of biodegradable polymers for cell proliferation in tissue engineering applications, and spot deposition for **DNA**, diagnostic **immunoassay**, **antibody** and protein arrays. We have created optical elements, sensors, and electrical interconnects by microdeposition of polymers and **metal** alloys. We have also demonstrated the integration of a reversed phase microcolumn within a piezoelectric dispenser for use in the fractionation of peptides for mass spectrometer analysis.

L65 ANSWER 9 OF 22 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2000-0300884 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2000 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Bio- and chemiluminescence in bioanalysis
Outlook on bioanalysis
AUTHOR: RODA A.; PASINI P.; GUARDIGLI M.; BARALDINI M.; MUSIANI M.; MIRASOLI M.
DYLLICK Christina (ed.); FRESENIUS Wilhelm (ed.)
CORPORATE SOURCE: Department of Pharmaceutical Sciences, University of Bologna, Via Belmeloro 6, 40126 Bologna, Italy; Institute of Chemical Sciences, University of Bologna, Italy; Department of Clinical and Experimental Medicine, Division of Microbiology, University of Bologna, Italy
SOURCE: Fresenius' journal of analytical chemistry, (2000), 366(6-7), 752-759, 63 refs.
ISSN: 0937-0633
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Germany, Federal Republic of
LANGUAGE: English
AVAILABILITY: INIST-853, 354000086497180230
AN 2000-0300884 PASCAL
CP Copyright .COPYRGT. 2000 INIST-CNRS. All rights reserved.
AB Analytical chemiluminescence and bioluminescence represent a versatile, ultrasensitive tool with a wide range of applications in diverse fields such as biotechnology, pharmacology, molecular biology, clinical and environmental chemistry. Enzyme activities and enzyme substrates and inhibitors can be efficiently determined when directly involved in luminescent reactions, and also when they take part in a reaction suitable for coupling to a final light-emitting reaction. Chemiluminescence detection has been exploited in the fields of flow-injection analysis and column-liquid chromatographic and capillary-electrophoretic separative systems, due to its high sensitivity

when compared with colorimetric detection. It has widely been used as an indicator of reactive oxygen species formation in cells and whole organs, thus allowing the study of a number of pathophysiological conditions related to oxidative stress. Chemiluminescence represents a sensitive and rapid alternative to radioactivity as a detection principle in **immunoassays** for the determination of a wide range of molecules (hormones, food additives, environmental **pollutants**) and in filter membrane biospecific reactions (Southern, Northern, Western, dot blot) for the determination of **nucleic** acids and **proteins**. Chemiluminescence has also been used for the sensitive and specific localization and quantitation of target analytes in tissue sections and single cells by immunohistochemistry and in situ hybridization techniques. A relatively recent application regards the use of luminescent reporter genes for the development of bioassays based on genetically engineered microorganisms or mammalian cells able to emit visible light in response to specific inorganic and organic compounds. Finally, the high detectability and rapidity of bio- and chemiluminescent detection make it suitable for the development of microarray-based high throughput screening assays, in which simultaneous, multianalyte detection is performed on multiple samples.

L65 ANSWER 10 OF 22 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
DUPLICATE

ACCESSION NUMBER: 2000:32667454 BIOTECHNO
TITLE: Highly sensitive optical chip **immunoassays** in human serum
AUTHOR: Schneider B.H.; Dickinson E.L.; Vach M.D.; Hoijer J.V.; Howard L.V.
CORPORATE SOURCE: B.H. Schneider, Photonic Sensor, 573-B Courtland Street NE, Atlanta, GA 30308, United States. E-mail: schneider@photonicsensor.com
SOURCE: Biosensors and Bioelectronics, (2000), 15/1-2 (13-22), 37 reference(s)
CODEN: BBIOE4 ISSN: 0956-5663
PUBLISHER ITEM IDENT.: S0956566300000567
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English

AN 2000:32667454 BIOTECHNO
AB Over the past decade the ability of refractometric optical sensors to quantitatively measure a wide range of biomolecules has been demonstrated. These include **proteins**, **nucleic** acids, microorganisms, and in competitive formats small molecules such as drugs and **pesticides**. Furthermore, by using high refractive index nanoparticles to amplify the biomolecular binding signal, sensitivities approaching those of well established diagnostic assays have been achieved. However, to date it has not been possible to show rapid detection of analytes in complex bodily fluids such as serum, in a one-step procedure, due to the interference resulting from non-specific binding (NSB) to the sensor surface. We have carried out preliminary work on the control of interference due to NSB using an optical chip based on the Hartman interferometer. This interferometer configuration employs a reference sensing region that can be functionalized separately from the specific sensing region. Optical chips were stored dry after surface functionalization, and rehydrated in serum. The observed level of background drift in serum was reduced by an order of magnitude when an exposed reference was used, compared to a reference which was blind to the sample. An additional 70% reduction in signal drift in serum was achieved by controlling the surface chemistry of the optical chip using a biotin-poly(ethylene glycol) (PEG) blocking agent. This functionalization procedure was combined with a sandwich assay using gold nanoparticles to develop a one-step assay for human chorionic gonadotropin (hCG) in human

serum with a detection limit of 0.1 ng/ml for a 35 min assay. .COPYRGT. 2000 Elsevier Science S.A. All rights reserved.

L65 ANSWER 11 OF 22 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1999:29479612 BIOTECHNO
TITLE: Fluorescence polarization: An analytical tool for **immunoassay** and drug discovery
AUTHOR: Nasir M.S.; Jolley M.E.
CORPORATE SOURCE: M.S. Nasir, Diachemix Corporation, 683 E. Center Street, Grayslake, IL 60030, United States. E-mail: m-nasir@nwu.edu
SOURCE: Combinatorial Chemistry and High Throughput Screening, (1999), 2/4 (177-190), 98 reference(s) CODEN: CCHSFU ISSN: 1386-2073
DOCUMENT TYPE: Journal; General Review
COUNTRY: Netherlands
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1999:29479612 BIOTECHNO
AB Fluorescence polarization (FP) is an intrinsically powerful technique for the rapid and homogeneous analysis of molecular interactions in biological/chemical systems. The technique has been successfully used to diagnose various viral and infectious diseases in humans and animals, to monitor therapeutic drug levels and substances of abuse in body fluids and to determine food born pathogens, grain mycotoxins and **pesticides**. It has also been used in monitoring enzyme catalyzed hydrolysis, **protein-protein** interactions, **DNA** diagnostics and high throughput screening during the course of drug discovery. Work by various groups, including our own, have demonstrated that the technique can replace a substantial number of solid phase assays. FP, defined by the equation P = ¢I(V) - I(H)!/¢I(V) + I(H)! (where V and H are the vertical and horizontal components of the intensity I of emitted light respectively when exited by vertically plane polarized light), is independent of the intensity of the light and the concentration of the fluorophore. Hence it is functional in colored and cloudy solutions. The FP of a fluorophore is proportional to its rotational relaxation time, which in turn depends upon its molecular volume (or molecular weight) at constant temperature and solution viscosity. When a fluorophore-labeled ligand binds to a larger molecule, equilibrium is established rapidly and the FP increases. This property has been successfully exploited in many fields as described in this review.

L65 ANSWER 12 OF 22 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1998:29001507 BIOTECHNO
TITLE: Biomarkers of free radical damage applications in experimental animals and in humans
AUTHOR: De Zwart L.L.; Meerman J.H.N.; Commandeur J.N.M.; Vermeulen N.P.E.
CORPORATE SOURCE: L.L. De Zwart, Vrije Universiteit, LACDR Dept. of Pharmacochemistry, Division of Molecular Toxicology, De Boelelaan 1083, 1081 HV Amsterdam, Netherlands. E-mail: dezwart@chem.vu.nl
SOURCE: Free Radical Biology and Medicine, (1998), 26/1-2 (202-226), 226 reference(s) CODEN: FRBMEH ISSN: 0891-5849
PUBLISHER ITEM IDENT.: S0891584998001968
DOCUMENT TYPE: Journal; General Review
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1998:29001507 BIOTECHNO
AB Free radical damage is an important factor in many pathological and

toxicological processes. Despite extensive research efforts in biomarkers in recent years, yielding promising results in experimental animals, there is still a great need for additional research on the applicability of, especially non-invasive, biomarkers of free radical damage in humans. This review gives an overview of the applications in experimental and human situations of four main groups of products resulting from free radical damage, these include: lipid peroxidation products, isoprostanes, **DNA**- hydroxylation products and **protein** hydroxylation products.

L65 ANSWER 13 OF 22 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 1998-0025553 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 1998 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Biological monitoring and biochemical effect monitoring of exposure to polycyclic aromatic hydrocarbons
AUTHOR: ANGERER J.; MANNSCHRECK C.; GUENDEL J.
CORPORATE SOURCE: Institute and Outpatient Clinic of Occupational, Social, and Environmental Medicine, Schillerstrasse 25/29, 91054 Erlangen, Germany, Federal Republic of
SOURCE: International archives of occupational and environmental health, (1997), 70(6), 365-377, 69 refs. ISSN: 0340-0131 CODEN: IAEHDW
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Germany, Federal Republic of
LANGUAGE: English
AVAILABILITY: INIST-917, 354000079517760020
AN 1998-0025553 PASCAL
CP Copyright .COPYRGT. 1998 INIST-CNRS. All rights reserved.
AB Polycyclic aromatic hydrocarbons (PAHs) are ubiquitous carcinogenic substances to which man is exposed in the environment and at certain workplaces. Estimation of the resulting health risk is therefore of great occupational-medical and environmental-medical importance. Determination of the **DNA** and **protein** adducts of PAHs is the most suitable way of estimating this risk. The analytical methods used thus far, above all, .sup.3.sup.2 P postlabeling, **immunoassays**, and synchronous fluorescence spectroscopy, are, however, too nonspecific; therefore, the results lack accuracy and are not comparable with one another. Only the use of very specific methods of instrumental analysis [above all, high-performance liquid chromatography (HPLC) and gas chromatography/mass spectrometry (GC/MS)] can counteract this deficit. However, these methods can successfully be used mainly to determine the protein adducts of PAHs. Hemoglobin adducts, for example, do not have repair mechanisms like DNA adducts. They therefore occur in higher concentrations and can thus be analytically detected more easily. At present, mainly the monohydroxylated metabolites of PAHs are being determined in urine with great success. Using specific enrichment methods and HPLC with fluorescence detection it is even possible today to determine the internal PAH exposure of the general population. The detection limits lie in the lower nanogram-per-liter range. In view of the importance of this group of substances, determination of PAH adducts and the detection of their metabolites in urine will remain at the center of future occupational-medical and environmental-medical/toxicological research. In general, the lack of reference substances must be lamented.

L65 ANSWER 14 OF 22 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN DUPLICATE

ACCESSION NUMBER: 1995:25282121 BIOTECHNO
TITLE: DNA repair in human cells: Quantitative assessment of bulky anti-BPDE-DNA adducts by non-competitive

immunoassays
AUTHOR: Venkatachalam S.; Denissenko M.; Wani A.A.
CORPORATE SOURCE: Department of Radiology, The Ohio State University,Columbus, OH 43210, United States.
SOURCE: Carcinogenesis, (1995), 16/9 (2029-2036)
CODEN: CRNGDP ISSN: 0143-3334
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1995:25282121 BIOTECHNO
AB Mutagenicity and carcinogenicity of the ubiquitous environmental **pollutant** benzo¢α!pyrene is mediated via its reactive diol epoxide metabolite, anti-BPDE, with the predominant formation of N.sup.2-deoxyguanine adducts in genomic **DNA**. Polyclonal and monoclonal **antibodies** specific for (±)-anti-BPDE DNA adducts were used for the quantitative detection of genotoxic damage in DNA treated in vitro and in vivo with (±)-anti-BPDE. In non-competitive enzyme-linked immunosorbent assay the polyclonal antiserum (BP1) exhibited higher affinity, avidity and sensitivity than the monoclonal antibody (5D2). A linear antibody binding response was observed over a wide carcinogen dose range with a detection limit of < 0.1 fmol adducts in immobilized DNA. Non-competitive immune-slot blot assay could detect 0.2 adducts/10.sup.6 nucleotides induced by < 1 nM (±)-anti-BPDE. The high sensitivity and mono-adduct specificity of non-competitive **immunoassays** allowed the detailed study of (±)-anti-BPDE-DNA adduct processing in human cells exposed to very low levels of the genotoxin. Analysis of polyclonal antiserum binding sites in DNA from repair-proficient human fibroblasts revealed adduct removal rates directly proportional to the initial genotoxic insult. Despite efficient repair, substantial damage persisted in repair-proficient cells exposed to high doses of the carcinogen. At low levels of initial damage (0.882 and 3.44 ± 0.17 adducts/10.sup.6 nucleotides) .sim.50% repair was observed after 4 and 8 h respectively. Cells removed .sim.40% of the lesions in 8 h at an intermediate level of damage (20.7 ± 1.5 adducts/10.sup.6 nucleotides). At higher DNA damage levels (105 ± 8 and 177 ± 1 adduct/10.sup.6 nucleotides) 33 and 19% of the lesions respectively were repaired in 24 h. Repair-deficient xeroderma pigmentosum group A fibroblast cells did not show any significant loss of antibody binding sites at high or low initial modification levels. These data suggest that the level of initial DNA damage has a significant impact on the overall efficiency of cellular repair, with potential implications for the biological consequences of deleterious DNA lesions in mammalian cells.

L65 ANSWER 15 OF 22 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 1995-0450091 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 1995 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): **DNA** and **protein** adducts
Guiding principles for the use of biological markers in the assessment of human exposure to environmental factors : an integrative approach of epidemiology and toxicology
AUTHOR: HEMMINKI K.; AUTRUP H.; HAUGEN A.
YOUNES Maged (ed.); LARSEN John Christian (ed.); KRZYZANOWSKI Michal (ed.)
CORPORATE SOURCE: Novum, Karolinska inst., cent. nutrition toxicology, 141 57 Huddinge, Sweden
WHO European cent. environment health, 3720 BA Bilthoven, Netherlands
World Health Organization. European Centre for

Environment and Health, Bilthoven, Netherlands (patr.)
SOURCE: Toxicology : (Amsterdam), (1995), 101(1-2), 41-53, refs. 3 p.1/4
Conference: Guiding principles for the use of biological markers in the assessment of human exposure to environmental factors. Workshop. European Centre for Environment and Health. Workshop, Cracow (Poland), 13 Sep 1993
ISSN: 0300-483X CODEN: TXICDD
DOCUMENT TYPE: Journal; Conference
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Ireland
LANGUAGE: English
AVAILABILITY: INIST-15984, 354000053530170040
AN 1995-0450091 PASCAL

AB Application of methods for the measurement of **DNA** and **protein** adducts in environmental studies was surveyed. The methods included the .sup.3.sup.2P-postlabelling assay, **immunoassay** and synchronous fluorescence spectroscopy for DNA adducts. Additionally, methods for detecting excreted urinary RNA and DNA adducts were discussed. The protein adduct techniques included both immunological and chemical assays. The techniques have been applied in occupational and environmental studies, but usually one assay at a time. As specific DNA adducts can now be assayed for, it would be important to use these methods and specific protein adduct assays in the same studies. It is important to develop further specific adduct tests. This can be done with the help of standard compounds, which also allow quantitation in the assays. An international bank of standard compounds would be a major advancement to human biomonitoring.

L65 ANSWER 16 OF 22 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1993:23133720 BIOTECHNO
TITLE: Human monoclonal antibody HA-1A binds to endotoxin via an epitope in the lipid A domain of lipopolysaccharide
AUTHOR: Bogard Jr. W.C.; Siegel S.A.; Leone A.O.; Damiano E.; Shealy D.J.; Ely T.M.; Frederick B.; Mascelli M.A.; Siegel R.C.; Machielse B.; Naveh D.; Kaplan P.M.; Daddona P.E.
CORPORATE SOURCE: Centocor, Inc., 200 Great Valley Parkway,Malvern, PA 19355, United States.
SOURCE: Journal of Immunology, (1993), 150/10 (4438-4449)
CODEN: JOIMA3 ISSN: 0022-1767
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1993:23133720 BIOTECHNO
AB HA-1A, a human IgM mAb, has been shown to significantly reduce mortality in septic patients with Gram-negative bacteremia, especially those with septic shock, in a controlled clinical trial. To confirm the reported specificity of this antibody for the lipid A domain of endotoxin, several assay systems were developed. These assay systems included an ELISA, which measured the binding of HA-1A to lipid A adsorbed to a solid phase; a rate nephelometry assay, which measured the ability of HA-1A to bind and aggregate lipid A in solution; and a dot-blot **immunoassay**, which measured the ability of HA-1A to interact with lipid A adsorbed to Immobilon-P. In all three assay systems, HA-1A bound in a dose-dependent manner to lipid A prepared from Salmonella minnesota R595 LPS, whereas negative control human IgM mAb or polyclonal antibodies did not. Several experimental approaches were employed to demonstrate the specificity of HA-1A in these assay systems. Both polymyxin B and murine IgG mAb (8A1) with a specificity for lipid A were able to competitively inhibit HA-1A

reactivity with lipid A in a dose-dependent manner. Furthermore, a murine IgG anti-Id mAb (9B5.5) developed against HA- 1A was also able to block the binding of HA-1A to lipid A in these assay formats. HA-1A reactivity with synthetic lipid A confirmed that HA-1A binding to the natural lipid A was not the result of **contaminants** in the latter. Finally, the reactivity of HA-1A against a variety of glucosamine-containing and fatty acid-containing compounds was assessed. Some weak interaction was seen with cardiolipin and chitin, but not with serum **proteins**, lipoteichoic acid, or **DNA**. Collectively, these results conclusively establish that HA-1A binds to the lipid A region of LPS by an interaction with the V region of the antibody.

L65 ANSWER 17 OF 22 LIFESCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 94:98923 LIFESCI
TITLE: Methods and techniques in virology
AUTHOR: Payment, P. [editor]; Trudel, M. [editor]
SOURCE: (1993) 309 pp.. MARCEL DEKKER. NEW YORK, NY (USA).
ISBN: 0-8247-9101-0.
DOCUMENT TYPE: Book
FILE SEGMENT: V; A
LANGUAGE: English
AB Advocating the use of virological methodology in a variety of research areas, this practical single-source reference presents step-by-step protocols of basic as well as advanced laboratory techniques - providing a comprehensive set of investigative practices ranging from the isolation, identification, titration, purification, and production of viruses to advanced molecular methods for the analysis of viral **proteins** and **nucleic** acids. Highlighting the most up-to-date developments in virological research, this book outlines laboratory safety requirements for the containment of infectious agents and toxic **contaminants**. Discusses procedures to ensure the rational and profitable use of laboratory animals. Contains detailed descriptions of inoculation techniques and sample preparation ... Reviews ion-exchange chromatography, affinity chromatography, and gel filtration. Explains immunocytochemical staining and radiolabeling techniques. Furnishing over 300 literature citations for further study of particular topics, Methods and Techniques in Virology is an essential resource for clinical virologists, microbiologists, molecular and cell biologists, immunologists, laboratory researchers and technical staff, and upper-level undergraduate and graduate students in these disciplines.

L65 ANSWER 18 OF 22 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1992:22090759 BIOTECHNO
TITLE: Immunological techniques in biotechnology research
AUTHOR: Werner R.G.; Berthold W.; Hoffmann H.; Walter J.; Werz W.
CORPORATE SOURCE: Dr Karl Thomae GmbH, Department of Biotechnology,D-7950 Biberach an der Riss, Germany.
SOURCE: Biochemical Society Transactions, (1992), 20/1 (221-226)
CODEN: BCSTB5 ISSN: 0300-5127
DOCUMENT TYPE: Journal; Conference Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1992:22090759 BIOTECHNO
AB Specific interactions between antigen and antibody provided the basis for a variety of applications of monoclonal antibodies of mouse origin. In enzyme linked **immunoassays** (e.l.i.s.a.) they are used for quantification and qualification of recombinant **DNA**-derived **proteins** and **contaminants** of proteinaceous nature. In addition, in epitope mapping they are a useful tool in characterization of the protein structure. For purification of proteins, monoclonal

antibodies can be used for immunoaffinity chromatography to gain the desired protein in high purity within a short period of development. In tumour-aging, monoclonal antibodies provide a high sensitivity and selectivity to tumour markers, and therefore, improve the detection of solid tumours and metastasis. In tumour therapy, they are used for drug targeting or act as a cytotoxic agent themselves. Monoclonal antibodies, which specifically interact with cell-adhesion molecules are currently developed as immunomodulating or immunosuppressive drugs. The opportunity of humanization of such monoclonal antibodies of mouse origin or the production of human monoclonal antibodies after immunization in vitro will provide future perspectives for the application of therapeutic monoclonal antibodies in cases where the human anti-mouse antibody (HAMA) response so far does not allow a long-term therapeutic application.

L65 ANSWER 19 OF 22 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
DUPLICATE
ACCESSION NUMBER: 1991:21333508 BIOTECHNO
TITLE: Immunochemical techniques in biological monitoring
AUTHOR: Rosner M.H.; Grassman J.A.; Haas R.A.
CORPORATE SOURCE: Air and Industrial Hygiene Laboratory, California Department of Health Services, 2151 Berkeley Way, Berkeley, CA 94704, United States.
SOURCE: Environmental Health Perspectives, (1991), 94/-(131-134)
CODEN: EVHPAZ ISSN: 0091-6765
DOCUMENT TYPE: Journal; Conference Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1991:21333508 BIOTECHNO
AB **Immunoassays** are analytical methods that detect interactions between antibodies and antigens. **Immunoassays** were used originally to detect large biological molecules. The new generation of these antibody-based assays can detect small synthetic compounds. As a result, **immunoassays** are being developed specifically for biomarkers of exposure and effect to environmentally prevalent chemicals. Immunochemical detection of parent compounds in blood and tissues, metabolites in excreta, and adducts with **DNA** and **protein** have been successfully performed by several investigators. Although there is great potential for use of **immunoassays** in biological monitoring studies, the limitations of these analyses must be fully understood to prevent improper evaluation of the acquired data. This review will cover some of the background material necessary to understand how an antibody-based assay is developed. The differences between polyclonal and monoclonal antibody-based assays and the importance of antibody class, affinity, specificity, and cross-reactivity must be considered in both study design and data analysis.

L65 ANSWER 20 OF 22 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1990:20200160 BIOTECHNO
TITLE: Conformational transitions of polynucleotides in the presence of rhodium complexes
AUTHOR: Thomas T.J.; Thomas T.
CORPORATE SOURCE: Department of Medicine, University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School, New Brunswick, NJ 08903, United States.
SOURCE: Journal of Biomolecular Structure and Dynamics, (1990), 7/6 (1221-1235)
CODEN: JBSDD6 ISSN: 0739-1102
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English

SUMMARY LANGUAGE: English
AN 1990:20200160 BIOTECHNO
AB We studied the effects of hexammine and tris(ethylene diamine) complexes of rhodium on the conformation of poly(dG-dC).midldot.poly(dG-dC) and poly(dG-m.sup.5dC).midldot.poly(dG-m.sup.5dC) using spectroscopic techniques and an enzyme **immunoassay**. Circular dichroism spectroscopic measurements showed that Rh(NH.sub.3).sub.6.sup.3.sup.+ provoked a B-DNA→Z-DNA→Ψ-DNA conformational transition in poly(dG-dC).midldot.poly(dG-dC). Using the enzyme **immunoassay** technique with a monoclonal anti-Z-**DNA antibody**, we found that the left-handedness of the polynucleotide was maintained in the Ψ-DNA form. In addition, we compared the efficacy of Rh(NH.sub.3).sub.6.sup.3.sup.+ and Rh(en).sub.3.sup.3.sup.+ to provoke the Z-DNA conformation in poly(dG-dC).midldot.poly(dG-dC) and poly(dG-m.sup.5dC).midldot.poly(dG-m.sup.5dC). The concentrations of Rh(NH.sub.3).sub.6.sup.3.sup.+ and Rh(en).sub.3.sup.3.sup.+ at the midpoint B-DNA→Z-DNA transition of poly(dG-dC).midldot.poly(dG-dC) were 48 ± 2 and 238 ± 2 μM, respectively. The Ψ-DNA form of poly(dG-dC).midldot.poly(dG-dC) was stabilized at 500 μM Rh(NH.sub.3).sub.6.sup.3.sup.+. With poly(dG-m.sup.5dC).midldot.poly(dG-m.sup.5dC), both counterions provoked the Z-DNA form at approximately 5 μM and stabilized the polynucleotide in this form up to 1000 μM concentration. These results show that trivalent complexes of Rh have a profound influence on the conformation of poly(dG-dC).midldot.poly(dG-dC) and its methylated derivative. Furthermore, the Rh complexes are capable of maintaining the Z-DNA form at concentration ranges far higher than that of other trivalent complexes. Our results also demonstrate that the efficacy of trivalent inorganic complexes to induce the B-DNA to Z-DNa transition of poly(dG-dC).midldot.poly(dG-dC) poly(dG-m.sup.5dC).midldot.poly(dG-m.sup.5dC) is dependent on the nature of the ligand as well as the polynucleotide modification. Differences in charge density and hydration levels of counterions or base sequence- and counterion-dependent specific interactions between DNA and **metal** complexes might be possible mechanisms for the observed effects.

L65 ANSWER 21 OF 22 HEALSAFE COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 88:2859 HEALSAFE
TITLE: The application of **immunoassays** and fluorometry to the detection of polycyclic hydrocarbon-macromolecular adducts and anti-adduct antibodies in humans.
AUTHOR: Weston, A.; Rowe, M.; Poirier, M.; Trivers, G.; Vahakangas, K.; Newman, M.; Haugen, A.; Manchester, D.; Mann, D.; Harris, C.
CORPORATE SOURCE: Lab. Human Carcinog., Div. Cancer Etiol., NCI, Bethesda, MD, USA
SOURCE: INT. ARCH. OCCUP. ENVIRON. HEALTH., (1988) vol. 60, no. 3, pp. 157-162.
DOCUMENT TYPE: Journal
FILE SEGMENT: H
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The metabolic activation of polycyclic aromatic hydrocarbons (PAH) to chemical species that form covalent adducts with cellular macromolecules (**DNA** and **protein**) is central to theories of carcinogenesis. Assays are currently being developed that will accurately reflect human macromolecular exposure to these carcinogens. **Immunoassays** are capable of detecting low levels of PAH-**DNA** adducts and **antibodies** directed against these adducts in humans and HPLC/spectrophotofluorimetry allows the detection of carcinogen-**DNA** or carcinogen-**protein** adducts in human peripheral blood. Both types of method have inherent advantages and disadvantages, and the use of more than one type of corroborative assay is a feature in this work.

L65 ANSWER 22 OF 22 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1986:16003965 BIOTECHNO
TITLE: **Immunoassay** for the detection of E. coli **proteins** in recombinant **DNA** derived human growth hormone
AUTHOR: Anicetti V.R.; Fehskens E.F.; Reed B.R.; et al.
CORPORATE SOURCE: Department of Medicinal and Analytical Chemistry, Genentech, Inc., South San Francisco, CA 94080, United States.
SOURCE: Journal of Immunological Methods, (1986), 91/2 (213-224)
CODEN: JIMMBG
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
AN 1986:16003965 BIOTECHNO
AB An enzyme-linked immunosorbent assay (ELISA) has been developed for the quantitation of part-per-million levels of the most probable E. coli polypeptide (ECP) **contaminants** of E. coli produced biosynthetic human growth hormone (hGH). The antibody preparation, used for both coat and conjugate in this ELISA, was demonstrated to be reactive with the reference ECPs (a collection of the most probable protein **contaminants**) by both affinity chromatography and immunoblot analysis. Affinity purification of this antibody preparation using immobilized reference ECPs resulted in an assay with a higher signal-to-noise ratio and also 'normalized' the antibody population to approach stoichiometric equivalence with the immobilized ECPs. Reference ECPs, size fractionated by gel filtration, were quantitated in agreement with their absorbance at 280 nm. The assay was demonstrated to be specific for ECPs obtained from the hGH purification process. Since the purification of each recombinant **DNA** derived **protein** from E. coli requires its own unique process, this means that no generic ECP assay can be developed. It is felt that the criteria established for this assay provide a comprehensive approach to the development of quantitative multiple antigen **immunoassays**.

=> kekic m/au
L66 1 FILE AGRICOLA
L67 1 FILE BIOTECHNO
L68 0 FILE CONFSCI
L69 0 FILE HEALSAFE
'AU' IS NOT A VALID FIELD CODE
L70 0 FILE IMSDRUGCONF
L71 1 FILE LIFESCI
'AU' IS NOT A VALID FIELD CODE
L72 0 FILE MEDICONF
L73 2 FILE PASCAL

TOTAL FOR ALL FILES
L74 5 KEKIC M/AU

=> dup rem
ENTER L# LIST OR (END):l74
DUPLICATE IS NOT AVAILABLE IN 'IMSDRUGCONF, MEDICONF'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L74
L75 5 DUP REM L74 (0 DUPLICATES REMOVED)

=> d l75 ibib abs total

L75 ANSWER 1 OF 5 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on

STN
ACCESSION NUMBER: 2005-0199067 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2005 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): A novel biosensor for mercuric ions based on motor proteins
AUTHOR: MARTINEZ-NEIRA R.; **KEKIC M.**; NICOLAU D.; DOS REMEDIOS C. G.
CORPORATE SOURCE: Department of Anatomy and Histology, Institute for Biomedical Research, University of Sydney, Anderson Stuart Bldg. F 13, Sydney NSW2006, Australia; Department of Biomedical Engineering, Swinburne University of Technology, Hawthorn 3122, Australia
SOURCE: Biosensors & bioelectronics, (2005), 20(7), 1428-1432, 20 refs.
ISSN: 0956-5663
DOCUMENT TYPE: Journal; Short communication
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United Kingdom
LANGUAGE: English
AVAILABILITY: INIST-20668, 354000126471790230
AN 2005-0199067 PASCAL
CP Copyright .COPYRGT. 2005 INIST-CNRS. All rights reserved.
AB We explored the potential of contractile proteins, actin and myosin, as biosensors of solutions containing mercuric ions. We demonstrate that the reaction of HgCl.sub.2 with myosin rapidly inhibits actin-activated myosin ATPase activity. Mercuric ions inhibit the in vitro analog of contraction, namely the ATP-initiated superprecipitation of the reconstituted actomyosin complex. Hg reduces both the rate and extent of this reaction. Direct observation of the propulsive movement of actin filaments (10 nm in diameter and 1 μm long) in a motility assay driven by a proteolytic fragment of myosin (heavy meromyosin or HMM) is also inhibited by mercuric ions. Thus, we have demonstrated the biochemical, biophysical and nanotechnological basis of what may prove to be a useful nano-device.

L75 ANSWER 2 OF 5 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2004-0411780 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2004 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): A novel biosensor for mercuric ions based on motor proteins
BioMEMS and nanotechnology : Perth, 10-12 December 2003
AUTHOR: MARTINEZ R.; **KEKIC M.**; BULJAN V.; NICOLAU D.; DOS REMEDIOS C. G.
NICOLAU Dan V. (ed.); MULLER Uwe R. (ed.); DELL John M. (ed.)
CORPORATE SOURCE: Institute for Biomedical Research, University of Sydney, Sydney 2006, Australia; Department of Biomedical Engineering, Swinburne University of Technology, Hawthorn 3122, Australia
International Society for Optical Engineering, Bellingham WA, United States (patr.)
SOURCE: SPIE proceedings series, (2004), 5275, 204-212, refs. 1 p.1/4
Conference: BioMEMS and nanotechnology. Conference, Perth (Australia), 10 Dec 2003
ISSN: 1017-2653
ISBN: 0-8194-5168-1
DOCUMENT TYPE: Journal; Conference
BIBLIOGRAPHIC LEVEL: Analytic

COUNTRY: United States
LANGUAGE: English
AVAILABILITY: INIST-21760, 354000117902690260
AN 2004-0411780 PASCAL

AB We explored the potential for use of the contractile proteins, actin and myosin, as biosensors of solutions containing mercury ions. We demonstrate that the reaction of HgCl.sub.2 with myosin rapidly inhibits actin-activated myosin ATPase activity. Mercuric ions inhibit the in vitro analog of contraction, namely the ATP-initiated superprecipitation of the reconstituted actomyosin complex. Hg reduces both the rate and extent of this reaction. Direct observation of the propulsive movement of actin filaments (10 nm in diameter and 1 μm long) in a motility assay driven by a proteolytic fragment of myosin (heavy meromyosin or HMM) is also inhibited by mercuric ions. Thus, we have demonstrated the biochemical, biophysical and nanotechnological basis of what may prove to be a useful nano-device.

L75 ANSWER 3 OF 5 LIFESCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 2004:35595 LIFESCI
TITLE: The Expression and Significance of Metallothioneins in Murine Organs and Tissues Following Mercury Vapour Exposure
AUTHOR: Stankovic, R.K.; Lee, V.; **Kekic, M.**; Harper, C.
CORPORATE SOURCE: Department of Pathology, University of Sydney, New South Wales, Australia
SOURCE: Toxicologic Pathology [Toxicol. Pathol.], (20031000) vol. 31, no. 5, pp. 514-523.
ISSN: 0192-6233.
DOCUMENT TYPE: Journal
FILE SEGMENT: X
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The fate of inspired mercury vapour (Hg super(0)) is critical in the central nervous system (CNS) where it can circumvent the blood-brain barrier (BBB) at the neuromuscular junction (NMJ) and accumulate indefinitely in motor neurons by retrograde transport. The detoxification of systemic Hg super(0) by lung and liver requires investigation. We exposed 129/Sv wild-type (Wt) and 129/Sv MT-I, II double knockout (KO) mice to 500 wg Hg super(0)/m super(3) for 4 hours to investigate the expression of MT in the lung, liver, and spinal cord following Hg super(0) exposure using unexposed groups as controls. There were congestive changes in liver and lung of both Wt and MT-KO groups of Hg super(0)-treated mice; these changes appeared more pronounced in the MT-KO group. Motor neurons in the spinal cord did not show any pathological changes. Based on expression of MT, liver appears to have a major role in trapping and stabilising mercury. In the spinal cord, MT was expressed in all white matter astrocytes and in some grey matter astrocytes. Notably, motor neurons did not express MT, and the presence of MT could not be demonstrated in the axons of the ventral root. The absence of MT expression in motor neurons and their axons suggests the dependence of the motor system on the detoxifying capacity of liver MTs.

L75 ANSWER 4 OF 5 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1981:12205942 BIOTECHNO
TITLE: Reduced active thyroid hormone levels after delivery
AUTHOR: Banovac K.; **Kekic M.**; Bzik Lj.; et al.
CORPORATE SOURCE: Dept. Med., Clin. Hosp., Dr Mladen Stojanovic, 41000 Zagreb, Yugoslavia.
SOURCE: Journal of Endocrinological Investigation, (1981), 4/3 (271-274)
CODEN: JEIND7
DOCUMENT TYPE: Journal; Article
COUNTRY: Italy

LANGUAGE: English
AN 1981:12205942 BIOTECHNO
AB The effect of delivery on the serum concentration of thyroid hormones was studied in 25 euthyroid women. After delivery serum free and total T.sub.3 and T.sub.4 fell transiently with simultaneous increase in reverse T.sub.3 while serum TSH and thyroxine binding globulin (TBG) concentrations showed no significant variation. These data suggest that i) similar to what happens in other stressfull situations, delivery influences peripheral T.sub.4 metabolism, and ii) an elevation of TBG in serum in the early puerperium does not prevent these changes.

L75 ANSWER 5 OF 5 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
ACCESSION NUMBER: 74:56757 AGRICOLA
DOCUMENT NUMBER: 74-9057350
TITLE: Tannins of Dalmatian Salvia officinalis and their changes during storage
Die Gerbstoffe der dalmatinischen Salvia officinalis und deren Veranderungen wahrend der Lagerung
AUTHOR(S): Murko, D; Ramic, S; **Kekic, M**
AVAILABILITY: DNAL (450 P697)
SOURCE: Plant Med, May 1974 Vol. 25, No. 3, pp. 295-300. Map. Eng. Sum.
DOCUMENT TYPE: Journal; Article
LANGUAGE: German

=> roger a/au
L76 1 FILE AGRICOLA
L77 2 FILE BIOTECHNO
L78 2 FILE CONFSCI
L79 0 FILE HEALSAFE
'AU' IS NOT A VALID FIELD CODE
L80 0 FILE IMSDRUGCONF
L81 7 FILE LIFESCI
'AU' IS NOT A VALID FIELD CODE
L82 0 FILE MEDICONF
L83 55 FILE PASCAL

TOTAL FOR ALL FILES
L84 67 ROGER A/AU

=> dosremedios c/au
L85 0 FILE AGRICOLA
L86 0 FILE BIOTECHNO
L87 0 FILE CONFSCI
L88 0 FILE HEALSAFE
'AU' IS NOT A VALID FIELD CODE
L89 0 FILE IMSDRUGCONF
L90 0 FILE LIFESCI
'AU' IS NOT A VALID FIELD CODE
L91 0 FILE MEDICONF
L92 0 FILE PASCAL

TOTAL FOR ALL FILES
L93 0 DOSREMEDIOS C/AU

=> Remedios c/au
L94 0 FILE AGRICOLA
L95 0 FILE BIOTECHNO
L96 1 FILE CONFSCI

```
L97             0 FILE HEALSAFE
'AU' IS NOT A VALID FIELD CODE
L98             0 FILE IMSDRUGCONF
L99             0 FILE LIFESCI
'AU' IS NOT A VALID FIELD CODE
L100            0 FILE MEDICONF
L101            0 FILE PASCAL

TOTAL FOR ALL FILES
L102            1 REMEDIOS C/AU

=> dos remedios/au
L103            0 FILE AGRICOLA
L104            0 FILE BIOTECHNO
L105            0 FILE CONFSCI
L106            0 FILE HEALSAFE
'AU' IS NOT A VALID FIELD CODE
L107            0 FILE IMSDRUGCONF
L108            0 FILE LIFESCI
'AU' IS NOT A VALID FIELD CODE
L109            0 FILE MEDICONF
L110            0 FILE PASCAL

TOTAL FOR ALL FILES
L111            0 DOS REMEDIOS/AU

=> dos remedios c/au
L112            1 FILE AGRICOLA
L113            1 FILE BIOTECHNO
L114            2 FILE CONFSCI
L115            0 FILE HEALSAFE
'AU' IS NOT A VALID FIELD CODE
L116            0 FILE IMSDRUGCONF
L117            0 FILE LIFESCI
'AU' IS NOT A VALID FIELD CODE
L118            0 FILE MEDICONF
L119            7 FILE PASCAL

TOTAL FOR ALL FILES
L120           11 DOS REMEDIOS C/AU

=> dup rem
ENTER L# LIST OR (END):l120
DUPLICATE IS NOT AVAILABLE IN 'IMSDRUGCONF, MEDICONF'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L120
L121            10 DUP REM L120 (1 DUPLICATE REMOVED)

=> d l121 ibib abs total

L121  ANSWER 1 OF 10  PASCAL  COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED.
      on STN
ACCESSION NUMBER:         2004-0478043   PASCAL
COPYRIGHT NOTICE:         Copyright .COPYRGT. 2004 INIST-CNRS. All rights
                          reserved.
TITLE (IN ENGLISH):       Thoracic outlet syndrome due to a posterior
                          sternoclavicular dislocation
TITLE (IN FRENCH):        Syndrome de la traversee cervico-thoraco-brachiale
                          secondaire a une luxation posterieure
                          sterno-claviculaire
                          Les fractures du femur chez l'enfant / Les protheses
                          totales du genou dans les grandes deviations axiales /
                          Prise en charge des tumeurs des parties molles
```

AUTHOR: GENESTET M.; **DOS REMEDIOS C.**; PRUDHOMME M.; STINDEL E.; DUBRANA F.; LENEN D.; LEFEVRE C.
CORPORATE SOURCE: Service d'Orthopedie-Traumatologie, hopital de la Cavale Blanche, Boulevard Tanguy-Prigent, 29609 Brest, France
Societe orthopedique de l'ouest (S.O.O.), 44100 Chateaubriant, France (patr.)
SOURCE: Annales orthopediques de l'Ouest, (2004)(36), 163-165, 4 refs.
Conference: Reunion annuelle de la societe orthopedique de l'ouest, La Baule (France), 2003
ISSN: 0291-8307
DOCUMENT TYPE: Journal; Conference
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: France
LANGUAGE: French
SUMMARY LANGUAGE: English
AVAILABILITY: INIST-18750, 354000116303250210
AN 2004-0478043 PASCAL

ABFR Les auteurs rapportent un cas de syndrome de la traversee cervico-thoraco-brachiale secondaire a une luxation posterieure sterno-claviculaire negligee datant de deux ans. Le diagnostic a ete realise grace au scanner 3D. Le traitement a ete chirurgical associant une reduction, une neurolyse du plexus brachial avec scalenotomie anterieure, une resection a minima de la clavicule et stabilisation musculaire renforcee a l'aide d'un Gore-Tex*.

L121 ANSWER 2 OF 10 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2004-0253179 PASCAL

TITLE (IN ENGLISH): Management of severe trauma of the hand by stable osteosynthesis with a "multiple pinning" procedure
TITLE (IN FRENCH): Osteosynthese stable dans le traitement des mains complexes par le ' brochage multiple '
AUTHOR: LE NEN D.; HU W.; GENESTET M.; LIOT M.; TRAN QUAN J.; **DOS REMEDIOS C.**; MENER G.
CORPORATE SOURCE: Unite de chirurgie traumatologique, reconstructrice et urgences mains, CHU de Brest, France; Centre de reeducation fonctionnelle, centre helio-marin, Roscoff, France
SOURCE: Chirurgie de la main, (2004), 23(2), 100-108, 9 refs.
ISSN: 1297-3203
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: France
LANGUAGE: French
SUMMARY LANGUAGE: English
AVAILABILITY: INIST-19919, 354000115021360060
AN 2004-0253179 PASCAL

ABFR Les auteurs rapportent, dans le traitement des fracas osteoarticulaires des doigts, l'utilisation du ' brochage multiple ', methode relativement simple, rapide et stable, associe a une protection par orthese et reeducation immediate. L'objectif de cette prise en charge est d'offrir au patient une pince pollici-digitale, aux mieux grace a des doigts reconstruits a deux articulations fonctionnelles (metacarpophalangienne et interphalangienne proximale), voire a une seule articulation fonctionnelle (metacarpophalangienne), interessante surtout s'il s'agit de doigts radiaux. Technique. - Apres reduction maintenue par daviers, des broches dont le diametre est tres fin sont introduites. Les fragments

fracturaires sont reconstitues tel un puzzle, le faible diametre des broches autorisant leur introduction en nombre suffisant et leur orientation avec une grande facilite. C'est le caractere multiple, parallele et/ou divergent de ces broches qui confere au montage sa stabilite. Les broches sont, soit laissees apparentes et recourbees, soit le plus souvent coupees au ras de l'os. Les comminutions meme les plus severes repondent bien a ce traitement. Discussion. - Le brochage multiple offre une stabilite remarquable, compatible avec une reeducation rapide. Cette technique d'osteosynthese s'est imposee dans notre pratique devant la difficulte de traiter les fracas ouverts des metacarpiens et des phalanges; elle n'ajoute pas de lesions cutanees supplementaires. Sa stabilite tient a la prise des broches dans des corticales epaisses, surtout en region diaphysaire; au caractere court des broches (diminution de leur flexibilite, meilleure rigidite); et aussi a leur nombre. On peut reprocher a l'utilisation de broches perdues le risque de migration possible en postoperatoire.

L121 ANSWER 3 OF 10 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2004-0140069 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2004 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Effect of anterior and posterior capsule release on elbow joint stability: an experimental study
TITLE (IN FRENCH): Effet de la capsulectomie anterieure et posterieure sur la stabilite du coude : etude experimentale
AUTHOR: **DOS REMEDIOS C.**; CHANTELOT C.; MIGAUD H.; LE NEN D.; FONTAINE C.; LANDJERIT B.
CORPORATE SOURCE: Clinique d'Orthopedie Pierre Decoulx, Hopital Roger Salengro, CHRU, 59037 Lille, France; Faculte de Medecine Henri Warembourg, 59045 Lille, France; Service d'Orthopedie, Hopital La Cavale Blanche, CHRU, 29609 Brest, France; Laboratoire d'Anatomie et d'Organogenese, Faculte de Medecine, 1, place de Verdun, 59037 Lille, France; Laboratoire de Mecanique de Lille, Departement de l'EUDIL, Cite Scientifique, Polytech'Lille/EUDIL, 59655 Villeneuve d'Ascq, France
SOURCE: Revue de chirurgie orthopedique et reparatrice de l'appareil moteur, (2003), 89(8), 693-698, 17 refs. ISSN: 0035-1040 CODEN: RCORAI
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: France
LANGUAGE: French
SUMMARY LANGUAGE: English
AVAILABILITY: INIST-3792, 354000118893190030
AN 2004-0140069 PASCAL
CP Copyright .COPYRGT. 2004 INIST-CNRS. All rights reserved.
ABFR Le role de la capsule sur la stabilite articulaire du coude est controverse. Dans l'hypothese ou la capsulectomie anterieure et posterieure induirait une laxite postoperatoire, les resultats des arthrolyses de coude pourraient en etre modifies. L'objectif de cette etude etait d'evaluer ces donnees par une etude cadaverique. Le role de la capsule articulaire dans la stabilite du coude a ete etudie dans 10 coudes cadaveriques frais. Une capsulectomie anterieure et posterieure a ete realisee en laissant intacts les complexes ligamentaires collateraux medial et lateral du coude. Des manoeuvres a la recherche de laxite en flexion-extension, valgus-varus et pronosupination du coude ont ete realisees dans un premier temps manuellement, puis dans un second temps dans un montage experimental par le meme operateur. Sous ces conditions, apres capsulectomie anterieure et posterieure isolee, aucune laxite articulaire n'a ete constatee dans le plan frontal ou sagittal. Il en etait de meme lorsque les contraintes etaient appliquees sur les coudes

en rotation axiale en compression ou en distraction. La constatation d'une laxite dans notre etude etait directement en rapport avec une liberation ou une section des complexes ligamentaires collateraux medial et/ou lateral. Au cours des gestes d'arthrolyse du coude, la capsulectomie anterieure et posterieure ne semble pas un facteur de laxite articulaire tant que les complexes ligamentaires collateraux medial et lateral sont conserves.

L121 ANSWER 4 OF 10 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2004-0080619 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2004 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Surgical correction of abduction deformity of the little finger by tenodesis. A cadaveric study
TITLE (IN FRENCH): Correction chirurgicale de l'abduction permanente du cinquieme doigt par tenodese. Etude preliminaire cadaverique
AUTHOR: **DOS REMEDIOS C.**; CHANTELOT C.; PRUD'HOMME M.; GENESTET M.; LE NEN D.; FONTAINE C.
CORPORATE SOURCE: Service d'orthopedie B, hopital Roger-Salengro, CHRU Lille, 59037 Lille, France; Service de traumatologie-orthopedie, hopital La Cavale Blanche, CHRU Brest, 29609 Brest, France; Laboratoire d'anatomie et d'organogenese, faculte de medecine, 1, place de Verdun, 59037 Lille, France
SOURCE: Chirurgie de la main, (2003), 22(3), 166-171, 16 refs. ISSN: 1297-3203
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: France
LANGUAGE: French
SUMMARY LANGUAGE: English
AVAILABILITY: INIST-19919, 354000112456290100
AN 2004-0080619 PASCAL
CP Copyright .COPYRGT. 2004 INIST-CNRS. All rights reserved.
ABFR L'abduction permanente du cinquieme doigt peut entrainer une gene quotidienne chez les patients presentant une paralysie ulnaire. Pour corriger cette deformation, des transferts actifs musculotendineux sont habituellement realises en utilisant l'appareil extenseur de la main. De par la variabilite anatomique de ce dernier, ces transferts actifs peuvent provoquer en postoperatoire des deficits d'extension du cinquieme doigt. L'analyse de l'orientation de ces transferts d'extenseurs montre une faible composante adductrice des forces de tension. Une correction chirurgicale par tenodese est proposee dans cette etude preliminaire. Cette plastie a pour objectif d'augmenter la composante adductrice du cinquieme doigt sans utiliser l'appareil extenseur des doigts. Les avantages et les inconvenients de cette technique sont discutes. Une evaluation clinique sera realisee ulterieurement pour confirmer la fiabilite de cette technique.

L121 ANSWER 5 OF 10 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN DUPLICATE

ACCESSION NUMBER: 1994:24053679 BIOTECHNO
TITLE: Fluorescence resonance energy transfer within the regulatory light chain of myosin
AUTHOR: Boey W.; Huang W.; Bennetts B.; Sparrow J.; **Dos Remedios C.**; Hambly B.
CORPORATE SOURCE: CRCERT, University of New South Wales, P. O. Box 1,Kensington, NSW 2033, Australia.
SOURCE: European Journal of Biochemistry, (1994), 219/1-2 (603-610)
CODEN: EJBCAI ISSN: 0014-2956

DOCUMENT TYPE: Journal; Article
COUNTRY: Germany, Federal Republic of
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1994:24053679 BIOTECHNO
AB Rabbit skeletal muscle myosin regulatory light chain-2 (LC2) contains two reactive cysteine residues, Cys125 and Cys154, and one tryptophan at position 137. Using wild-type rabbit LC2 or its genetically engineered mutant with Cys125→Arg (C125R), these residues can be selectively modified with fluorescent or chromophoric probes for spectroscopic studies. We have bound suitable donor/acceptor probe pairs to the two cysteine residues and Trp137 in LC2 or C125R, and measured the distance in solution between the probes by fluorescence resonance energy transfer spectroscopy. C125R was made to facilitate specific labelling of the less reactive Cys154, thus allowing the distance between Cys154 and Trp137 to be measured. Our measurements show that these residues are in close proximity to each other, the distance between them ranging from 1.7 nm (between Cys125 and Trp137) to 2.7 nm (Cys125 and Cys154). These results suggest that Cys125, Trp137 and Cys154, spanning up to 29 residues in the sequence of LC2, are spatially close, consistent with these residues residing within a C-terminal globular domain. The distances we obtained are in agreement with previous crosslinking studies ¢Huber, P. A., Brunner, U. T. and Schaub, M. C. (1989) Biochemistry 28, 9116-9123; Saraswat, L. and Lowey, S. (1991) J. Biol. Chemical 266, 19777-19785! and structure predictions of LC2. LC2 is located at the head-rod junction of the myosin crossbridge, and provides the primary regulatory mechanism in molluscan and smooth muscle. In skeletal muscle, its functional role is unclear, although it has been implicated in modulating actomyosin interaction ¢Metzger, J. M. and Moss, R. L. (1992) Biophys. J. 63, 460-468!. The incorporation of spectroscopic probes onto the light chains of myosin in solution or in fibres has become a valuable tool for evaluating the dynamic properties of the crossbridge during force generation.

L121 ANSWER 6 OF 10 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 1992-0482879 PASCAL
TITLE (IN ENGLISH): Uncoupling of actin-activated myosin ATPase activity from actin binding by a monoclonal antibody directed against the N-terminus of myosin light chain 1
AUTHOR: BOEY W.; EVERETT A. W.; SLEEP J.; KENDRICK-JONES J.; **DOS REMEDIOS C.**
CORPORATE SOURCE: Univ. Sidney, dep. anatomy, muscle res. unit, Sydney N.S.W. 2006, Australia
SOURCE: Biochemistry : (Easton), (1992), 31(16), 4090-4095, refs. 1/2 p.
ISSN: 0006-2960
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United States
LANGUAGE: English
AVAILABILITY: INIST-9758, 354000021178110270
AN 1992-0482879 PASCAL
AB The role of the N-terminal region of myosin light chain 1 (LC1) in actomyosin interaction was investigated using an IgG monoclonal antibody (2H2) directed against the N-terminal region of LC1. We defined the binding site of 2H2 by examining its cross-reactivity with myosin light chains from a variety of species and with synthetic oligopeptides. Our findings suggest that 2H2 is directed against the N-terminal region of LC1 which includes the trimethylated alanine residue at the N-terminus

L121 ANSWER 7 OF 10 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 1977-0457648 PASCAL
TITLE: Lanthanide ions and skeletal muscle sarcoplasmic reticulum. I. Gadolinium localization by electron microscopy.
AUTHOR: **DOS REMEDIOS C.**
CORPORATE SOURCE: Dep. anat., univ. Sydney, Sydney, N.S.W. 2006, Aust.
SOURCE: J. Biochem., (1977), 81(3), 703-708, 19 refs.
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Japan
LANGUAGE: English
AVAILABILITY: CNRS-2428
AN 1977-0457648 PASCAL
ABFR Effet de la concentration du Gd sur l'activite de l'ATPase des vesicules du reticulum sarcoplasmique du muscle squelettique de lapin. Etude sur microscopie electronique de ce reticulum sarcoplasmique avant et apres l'action du gadolinium.

L121 ANSWER 8 OF 10 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
ACCESSION NUMBER: 77:64525 AGRICOLA
DOCUMENT NUMBER: 77-9058608
TITLE: Lanthanide ions and [rabbit] skeletal muscle sarcoplasmic reticulum. I. Gadolinium localization by electron microscopy
AUTHOR(S): **Dos Remedios, C**
AVAILABILITY: DNAL (385 J822)
SOURCE: J Biochem (Tokyo), Mar 1977 Vol. 81, No. 3, pp. 703-708., Ref.
DOCUMENT TYPE: Journal; Article
LANGUAGE: English

L121 ANSWER 9 OF 10 CONFSCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 2003:27387 CONFSCI
DOCUMENT NUMBER: 03-027387
TITLE: Abductor pollicis longus muscle. Relations between innervation pattern, muscular bellies and number of distal tendons
AUTHOR: Fontaine, C.; **Dos Remedios, C.**; Chapnikoff, D.; Guillem, P.; Chantelot, C.
SOURCE: Anatomical Society of Great Britain and Ireland, c/o National Univ. of Ireland, Dept. of Anatomy, Cork, Ireland, UK; phone: 353-21-902115; fax: 353-21-273518; email: j.fraher@ucc.ie; URL: www.anatsoc.org.uk.
Meeting Info.: 000 3729: Anatomical Society of Great Britain and Ireland, Nederlandse Anatomen Vereniging and Sociedad Anatomica Espanola Joint Meeting (0003729). Dresden (Germany). 28-31 Mar 2003. Anatomical Society of Great Britain and Ireland.
DOCUMENT TYPE: Conference
FILE SEGMENT: DCCP
LANGUAGE: English

L121 ANSWER 10 OF 10 CONFSCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 2003:27296 CONFSCI
DOCUMENT NUMBER: 03-027296
TITLE: Distribution of articular constraints in the elbow joint. An in vitro study using pressure films
AUTHOR: Fontaine, C.; **Dos Remedios, C.**; Chantelot, C.; Migaud, H.; Landjerit, B.
SOURCE: Anatomical Society of Great Britain and Ireland, c/o

National Univ. of Ireland, Dept. of Anatomy, Cork, Ireland, UK; phone: 353-21-902115; fax: 353-21-273518; email: j.fraher@ucc.ie; URL: www.anatsoc.org.uk.
Meeting Info.: 000 3729: Anatomical Society of Great Britain and Ireland, Nederlandse Anatomen Vereniging and Sociedad Anatomica Espanola Joint Meeting (0003729). Dresden (Germany). 28-31 Mar 2003. Anatomical Society of Great Britain and Ireland.
DOCUMENT TYPE: Conference
FILE SEGMENT: DCCP
LANGUAGE: English

=> file .chemistry
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 110.28 157.50

FILE 'CAPLUS' ENTERED AT 13:30:45 ON 08 JUN 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BIOTECHNO' ENTERED AT 13:30:45 ON 08 JUN 2005
COPYRIGHT (C) 2005 Elsevier Science B.V., Amsterdam. All rights reserved.

FILE 'COMPENDEX' ENTERED AT 13:30:45 ON 08 JUN 2005
Compendex Compilation and Indexing (C) 2005
Elsevier Engineering Information Inc (EEI). All rights reserved.
Compendex (R) is a registered Trademark of Elsevier Engineering Information Inc.

FILE 'ANABSTR' ENTERED AT 13:30:45 ON 08 JUN 2005
COPYRIGHT (c) 2005 THE ROYAL SOCIETY OF CHEMISTRY (RSC)

FILE 'CERAB' ENTERED AT 13:30:45 ON 08 JUN 2005
COPYRIGHT (C) 2005 Cambridge Scientific Abstracts (CSA)

FILE 'METADEX' ENTERED AT 13:30:45 ON 08 JUN 2005
COPYRIGHT (c) 2005 Cambridge Scientific Abstracts (CSA)

FILE 'USPATFULL' ENTERED AT 13:30:45 ON 08 JUN 2005
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

=> dos remedios c/au
L122 0 FILE CAPLUS
L123 1 FILE BIOTECHNO
L124 1 FILE COMPENDEX
L125 0 FILE ANABSTR
L126 0 FILE CERAB
L127 0 FILE METADEX
L128 0 FILE USPATFULL

TOTAL FOR ALL FILES
L129 2 DOS REMEDIOS C/AU

=> d l129 ibib abs total

L129 ANSWER 1 OF 2 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1994:24053679 BIOTECHNO
TITLE: Fluorescence resonance energy transfer within the regulatory light chain of myosin
AUTHOR: Boey W.; Huang W.; Bennetts B.; Sparrow J.; **Dos Remedios C.**; Hambly B.

CORPORATE SOURCE: CRCERT, University of New South Wales, P. O. Box 1,Kensington, NSW 2033, Australia.
SOURCE: European Journal of Biochemistry, (1994), 219/1-2 (603-610)
CODEN: EJBCAI ISSN: 0014-2956
DOCUMENT TYPE: Journal; Article
COUNTRY: Germany, Federal Republic of
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1994:24053679 BIOTECHNO
AB Rabbit skeletal muscle myosin regulatory light chain-2 (LC2) contains two reactive cysteine residues, Cys125 and Cys154, and one tryptophan at position 137. Using wild-type rabbit LC2 or its genetically engineered mutant with Cys125→Arg (C125R), these residues can be selectively modified with fluorescent or chromophoric probes for spectroscopic studies. We have bound suitable donor/acceptor probe pairs to the two cysteine residues and Trp137 in LC2 or C125R, and measured the distance in solution between the probes by fluorescence resonance energy transfer spectroscopy. C125R was made to facilitate specific labelling of the less reactive Cys154, thus allowing the distance between Cys154 and Trp137 to be measured. Our measurements show that these residues are in close proximity to each other, the distance between them ranging from 1.7 nm (between Cys125 and Trp137) to 2.7 nm (Cys125 and Cys154). These results suggest that Cys125, Trp137 and Cys154, spanning up to 29 residues in the sequence of LC2, are spatially close, consistent with these residues residing within a C-terminal globular domain. The distances we obtained are in agreement with previous crosslinking studies ¢Huber, P. A., Brunner, U. T. and Schaub, M. C. (1989) Biochemistry 28, 9116-9123; Saraswat, L. and Lowey, S. (1991) J. Biol. Chemical 266, 19777-19785! and structure predictions of LC2. LC2 is located at the head-rod junction of the myosin crossbridge, and provides the primary regulatory mechanism in molluscan and smooth muscle. In skeletal muscle, its functional role is unclear, although it has been implicated in modulating actomyosin interaction ¢Metzger, J. M. and Moss, R. L. (1992) Biophys. J. 63, 460-468!. The incorporation of spectroscopic probes onto the light chains of myosin in solution or in fibres has become a valuable tool for evaluating the dynamic properties of the crossbridge during force generation.

L129 ANSWER 2 OF 2 COMPENDEX COPYRIGHT 2005 EEI on STN
ACCESSION NUMBER: 2005(10):2875 COMPENDEX
TITLE: Surface modification of biomaterials using plasma immersion ion implantation (PIII).
AUTHOR: Bilek, M.M.M. (University of Sydney, Sydney, NSW, Australia); Newton-McGee, K.; Tarrant, R.N.; McKenzie, D.R.; **Dos Remedios, C.**
MEETING TITLE: Transactions - 7th World Biomaterials Congress.
MEETING LOCATION: Sydney, Australia
MEETING DATE: 17 May 2004-21 May 2004
SOURCE: Transactions - 7th World Biomaterials Congress 2004.p 639
ISBN: 1877040193
PUBLICATION YEAR: 2004
MEETING NUMBER: 64310
DOCUMENT TYPE: Conference Article
TREATMENT CODE: Experimental
LANGUAGE: English
AN 2005(10):2875 COMPENDEX
AB Plasma immersion ion implantation (PIII) is a surface modification technique which involves placing the object to be treated into plasma and applying voltages in the range one to several tens of kilovolts to it. Ions with energies comparable to the applied bias are then drawn into the surface through the high voltage plasma sheath. In this paper we report

two modes in which this technique can be used to produce functional biomaterials. In the first mode PIII is used with condensable plasma, producing a surface coating with exceptional adhesion and toughness, as required for the surfaces of devices which are required to reside for extended periods in the human body. A carbon based material deposited in this way has been shown to have excellent properties for surface coatings for blood contacting devices. In the second mode PIII is performed in non-condensable plasma such as a reactive or non-reactive gas. Here we present the results of using this method to functionalise the surface of polymers, such as PEEK, for applications in biodevices. The surface modifications performed have been characterised with contact angle measurements, attenuated total internal reflection infra-red (ATR-IR) spectroscopy and XPS.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 12:47:15 ON 08 JUN 2005

=> file .meeting
'EVENTLINE' IS NOT A VALID FILE NAME
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files
that are available. If you have requested multiple files, you can
specify a corrected file name or you can enter "IGNORE" to continue
accessing the remaining file names entered.
ENTER A FILE NAME OR (IGNORE):ignore

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.42	0.42

FILE 'AGRICOLA' ENTERED AT 12:48:20 ON 08 JUN 2005

FILE 'BIOTECHNO' ENTERED AT 12:48:20 ON 08 JUN 2005
COPYRIGHT (C) 2005 Elsevier Science B.V., Amsterdam. All rights reserved.

FILE 'CONFSCI' ENTERED AT 12:48:20 ON 08 JUN 2005
COPYRIGHT (C) 2005 Cambridge Scientific Abstracts (CSA)

FILE 'HEALSAFE' ENTERED AT 12:48:20 ON 08 JUN 2005
COPYRIGHT (C) 2005 Cambridge Scientific Abstracts (CSA)

FILE 'IMSDRUGCONF' ENTERED AT 12:48:20 ON 08 JUN 2005
COPYRIGHT (C) 2005 IMSWORLD Publications Ltd.

FILE 'LIFESCI' ENTERED AT 12:48:20 ON 08 JUN 2005
COPYRIGHT (C) 2005 Cambridge Scientific Abstracts (CSA)

FILE 'MEDICONF' ENTERED AT 12:48:20 ON 08 JUN 2005
COPYRIGHT (c) 2005 FAIRBASE Datenbank GmbH, Hannover, Germany

FILE 'PASCAL' ENTERED AT 12:48:20 ON 08 JUN 2005
Any reproduction or dissemination in part or in full,
by means of any process and on any support whatsoever
is prohibited without the prior written agreement of INIST-CNRS.
COPYRIGHT (C) 2005 INIST-CNRS. All rights reserved.

=> protein(7A)(DNA or nucleic)(15)(displace or replace or compete or dissociate or dissociation)
MISSING OPERATOR NUCLEIC)(15
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> protein(7A)(DNA or nucleic)(15A)(displace or replace or compete or dissociate or dissociation)

L1	13	FILE AGRICOLA
L2	312	FILE BIOTECHNO
L3	1	FILE CONFSCI
L4	3	FILE HEALSAFE
L5	0	FILE IMSDRUGCONF
L6	312	FILE LIFESCI

```
L7            0 FILE MEDICONF
L8           79 FILE PASCAL

TOTAL FOR ALL FILES
L9          720 PROTEIN(7A)(DNA OR NUCLEIC)(15A)(DISPLACE OR REPLACE OR COMPETE
                OR DISSOCIATE OR DISSOCIATION)

=> protein(7A)(DNA or nucleic)(9A)(displace or replace or compete or dissociate or
dissociation)
L10          11 FILE AGRICOLA
L11         240 FILE BIOTECHNO
L12           1 FILE CONFSCI
L13           2 FILE HEALSAFE
L14           0 FILE IMSDRUGCONF
L15         240 FILE LIFESCI
L16           0 FILE MEDICONF
L17          53 FILE PASCAL

TOTAL FOR ALL FILES
L18         547 PROTEIN(7A)(DNA OR NUCLEIC)(9A)(DISPLACE OR REPLACE OR COMPETE
                OR DISSOCIATE OR DISSOCIATION)

=> l18 and (toxicant or pollutant or pesticide or compound)
L19           2 FILE AGRICOLA
L20           5 FILE BIOTECHNO
L21           0 FILE CONFSCI
L22           0 FILE HEALSAFE
L23           0 FILE IMSDRUGCONF
L24           6 FILE LIFESCI
L25           0 FILE MEDICONF
L26           2 FILE PASCAL

TOTAL FOR ALL FILES
L27          15 L18 AND (TOXICANT OR POLLUTANT OR PESTICIDE OR COMPOUND)

=> dup rem
ENTER L# LIST OR (END):l27
DUPLICATE IS NOT AVAILABLE IN 'IMSDRUGCONF, MEDICONF'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L27
L28           10 DUP REM L27 (5 DUPLICATES REMOVED)

=> d 128 ibib abs total

L28  ANSWER 1 OF 10  LIFESCI    COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER:   2004:103127  LIFESCI
TITLE:              Nucleic Acid Is a Novel Ligand for Innate, Immune Pattern
                    Recognition Collectins Surfactant Proteins A and D and
                    Mannose-binding Lectin
AUTHOR:             Palaniyar, Nades; Nadesalingam, Jeya; Clark, Howard; Shih,
                    Michael J.; Dodds, Alister W.; Reid, Kenneth B. M.
CORPORATE SOURCE:   MRC Immunochemistry Unit, Department of Biochemistry, The
                    University of Oxford, Oxford OX1 3QU, United Kingdom and
                    the Lung Biology Research Program, Hospital for Sick
                    Children Research Institute, Toronto, Ontario M5G 1X8,
                    Canada
SOURCE:             Journal of Biological Chemistry [J. Biol. Chem.], (20040730
     )              vol. 279, no. 31, pp. 32728-32736.
                    ISSN: 0021-9258.
DOCUMENT TYPE:      Journal
FILE SEGMENT:       F; N
LANGUAGE:           English
SUMMARY LANGUAGE:   English
```

AB Collectins are a family of innate immune proteins that contain fibrillar collagen-like regions and globular carbohydrate recognition domains (CRDs). The CRDs of these proteins recognize various microbial surface-specific carbohydrate patterns, particularly hexoses. We hypothesized that collectins, such as pulmonary surfactant proteins (SPs) SP-A and SP-D and serum protein mannose- binding lectin, could recognize nucleic acids, pentose-based anionic phosphate polymers. Here we show that collectins bind DNA from a variety of origins, including bacteria, mice, and synthetic oligonucleotides. Pentoses, such as arabinose, ribose, and deoxyribose, inhibit the interaction between SP-D and mannan, one of the well-studied hexose ligands for SP-D, and biologically relevant D-forms of the pentoses are better competitors than the L-forms. In addition, DNA and RNA polymer-related **compounds**, such as nucleotide diphosphates and triphosphates, also inhibit the carbohydrate binding ability of SP-D, or [approx]60 kDa trimeric recombinant fragments of SP-D that are composed of the alpha-helical coiled-coil neck region and three CRDs (SP-D(n/CRD)) or SP- D(n/CRD) with eight GXY repeats (SPD(GXY) sub(8)(n/CRD)). Direct binding and competition studies suggest that collectins bind nucleic acid via their CRDs as well as by their collagen-like regions, and that SP-D binds DNA more effectively than do SP-A and mannose-binding lectin at physiological salt conditions. Furthermore, the SP-D(GXY) sub(8)(n/CRD) fragments co-localize with **DNA**, and the **protein** **competes** the interaction between propidium iodide, a **DNA** -binding dye, and apoptotic cells. In conclusion, we show that collectins are a new class of proteins that bind free DNA and the DNA present on apoptotic cells by both their globular CRDs and collagen-like regions. Collectins may therefore play an important role in decreasing the inflammation caused by DNA in lungs and other tissues.

L28 ANSWER 2 OF 10 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 1

ACCESSION NUMBER: 2001:74674 AGRICOLA
DOCUMENT NUMBER: IND23231689
TITLE: Kinetic trapping of DNA by transcription factor IIIB.
AUTHOR(S): Cloutier, T.E.; Librizzi, M.D.; Mollah, A.K.M.M.; Brenowitz, M.; Willis, I.M.
AVAILABILITY: DNAL (500 N21P)
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, Aug 14, 2001. Vol. 98, No. 17. p. 9581-9586
Publisher: Washington, D.C. : National Academy of Sciences,
CODEN: PNASA6; ISSN: 0027-8424
NOTE: Includes references
PUB. COUNTRY: District of Columbia; United States
DOCUMENT TYPE: Article; Conference
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

AB High levels of RNA polymerase III gene transcription are achieved by facilitated recycling of the polymerase on transcription factor IIIB (TFIIIB)-DNA complexes that are stable through multiple rounds of initiation. TFIIIB-DNA complexes in yeast comprise the TATA-binding protein (TBP), the TFIIB-related factor TFIIIB70, and TFIIIB90. The high stability of the TFIIIB-DNA complex is conferred by TFIIIB90 binding to TFIIIB70-TBP-DNA complexes. This stability is thought to result from **compound** bends introduced in the **DNA** by TBP and TFIIIB90 and by **protein-protein** interactions that obstruct **DNA dissociation**. Here we present biochemical evidence that the high stability of TFIIIB-DNA complexes results from kinetic trapping of the DNA. Thermodynamic analysis shows that the free energies of formation of TFIIIB70-TBP-DNA (deltaG degrees = -12.10 +/- 0.12

kcal/mol) and TFIIIB-DNA (deltaG degrees = -11.90 +/- 0.14 kcal/mol) complexes are equivalent whereas a kinetic analysis shows that the half-lives of these complexes (46 +/- 3 min and 95 +/- 6 min, respectively) differ significantly. The differential stability of these isoenergetic complexes demonstrates that TFIIIB90 binding energy is used to drive conformational changes and increase the barrier to complex dissociation.

L28 ANSWER 3 OF 10 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
DUPLICATE
ACCESSION NUMBER: 2000:30489939 BIOTECHNO
TITLE: Stopped-flow fluorescence studies of HMG-domain protein binding to cisplatin-modified DNA
AUTHOR: Jamieson E.R.; Lippard S.J.
CORPORATE SOURCE: S.J. Lippard, Department of Chemistry, Massachusetts Inst. of Technology, 77 Massachusetts Ave., Cambridge, MA 02139, United States.
E-mail: lippard@lippard.mit.edu
SOURCE: Biochemistry, (25 JUL 2000), 39/29 (8426-8438), 51 reference(s)
CODEN: BICHAW ISSN: 0006-2960
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 2000:30489939 BIOTECHNO
AB High-mobility group (HMG) domain proteins bind specifically to the major DNA adducts formed by the anticancer drug cisplatin and can modulate the biological response to this inorganic **compound**. Stopped-flow fluorescence studies were performed to investigate the kinetics of formation and dissociation of complexes between HMG-domain proteins and a series of 16-mer oligonucleotide probes containing both a 1,2-intrastrand d(GpG) cisplatin cross-link and a fluorescein-modified deoxyuridine residue. Rate constants, activation parameters, and dissociation constants were determined for complexes formed by HMG1 domain A and the platinated DNA probes. The sequence context of the cisplatin adduct modulates the value of the associative rate constant for HMG1 domain A by a factor of 2-4, contributing significantly to differences in binding affinity. The rates of association or **dissociation** of the **protein-DNA** complex were similar for a 71 bp platinated DNA analogue. Additional kinetic studies performed with HMG1 domain B, an F37A domain A mutant, and the full-length HMG1 protein highlight differences in the binding properties of the HMG domains. The stopped-flow studies demonstrate the utility of the fluorescein-dU probe in studying protein-DNA complexes. The kinetic data will assist in determining what role these proteins might play in the cisplatin mechanism of action.

L28 ANSWER 4 OF 10 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 2000-0313457 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2000 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Microregional heterogeneity of non-prótein thiols in cervical carcinomas assessed by combined use of HPLC and fluorescence image analysis
AUTHOR: VUKOVIC V.; NICKLEE T.; HEDLEY D. W.
CORPORATE SOURCE: Department of Medical Biophysics, Ontario Cancer Institute, Toronto, Ontario, M5G 2M9, Canada; Department of Oncologic Pathology, Princess Margaret Hospital, Toronto, Ontario, M5G 2M9, Canada; Department of Medical Oncology and Hematology, Princess Margaret Hospital, Toronto, Ontario, M5G 2M9,

Canada
SOURCE: Clinical cancer research, (2000), 6(5), 1826-1832, 33 refs.
ISSN: 1078-0432
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United States
LANGUAGE: English
AVAILABILITY: INIST-26073, 354000087327120270
AN 2000-0313457 PASCAL

AB Under low oxygen conditions, non-protein thiols (NPSHs, non-**protein** sulfhydryls) can effectively **compete** for **DNA** radicals sites and hence represent a potentially important cause of radiation resistance in the clinic. Intra-and intertumoral heterogeneity of glutathione (GSH) and cysteine were assessed in cryostat sections of multiple biopsies obtained from 10 cervical carcinomas by the combined use of a sensitive high-performance liquid chromatography (HPLC) method and a fluorescence image analysis technique to examine the spatial distribution of NPSHs in tumor tissue. Glutathione concentrations ranged from 1.98 to 4.42 mM; significant (>=1 mM) concentrations of cysteine, a more effective radioprotector than GSH, were found in some tumors. By HPLC, the intratumoral heterogeneity of NPSHs was relatively small compared with the intertumoral heterogeneity. The histochemical stain 1-(4-chloromercuryphenoylazo)-2-napthol (mercury orange), which binds to GSH and cysteine, was used to determine the spatial distribution of NPSHs in tumor tissue. A comparison of NPSH levels in serial cryostat sections showed a close correlation between NPSH values determined by HPLC and mercury orange fluorescence quantification. Using fluorescence image analysis, an .eqvsim.2-fold increase of NPSHs in tumor versus nonmalignant tissue was observed in the same section. Because some cervical carcinomas contain radiobiologically important levels of cysteine, agents that target the biochemical pathways maintaining tumor cysteine have therapeutic potential as adjuncts to radiotherapy in cervix cancer patients.

L28 ANSWER 5 OF 10 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2001-0142641 PASCAL

TITLE (IN ENGLISH): Cadmium and lead interactions with transcription factor IIIA from Xenopus laevis : a model for zinc finger protein reactions with toxic metal ions and metallothionein
Pollutant Responses in Marine Organisms (PRIMO 10)
AUTHOR: PETERING D. H.; HUANG M.; MOTEKI S.; SHAW C. F. III FAISAL Mohamed (ed.); ELSKUS Adria A. (ed.); HALE Robert C. (ed.); MCLAUGHLIN Shawn M. (ed.)
CORPORATE SOURCE: Department of Chemistry, University of Wisconsin-Milwaukee, Milwaukee, WI 53201, United States
Virginia Institute of Marine Science/School of Marine Science, The College of William and Mary, Williamsburg, Virginia, United States; T.H. Morgan School of Biological Sciences, University of Kentucky, United States; National Ocean Service, NOAA, Oxford, Maryland, United States; Marine Science Research Center, State University of New York, Stony Brook, United States
SOURCE: Marine environmental research, (2000), 50(1-5), 89-92, 12 refs.

Conference: 10 PRIMO International Symposium on Pollutant Responses in Marine Organisms, Williamsburg, Virginia (United States), 25 Apr 1999
ISSN: 0141-1136
DOCUMENT TYPE: Journal; Conference
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United Kingdom
LANGUAGE: English
AVAILABILITY: INIST-17986, 354000093274700130
AN 2001-0142641 PASCAL

AB Zinc finger proteins comprise the largest class of eukaryotic transcription factors. The metal binding sites in these proteins have been proposed as plausible targets for exchange reactions between zinc and toxic metal ions that lead to the alteration of function of the proteins in gene transcription. According to the present work, both Cd.sup.2.sup.+ and Pb.sup.2.sup.+ displace Zn.sup.2.sup.+ from transcription factor IIIA (TFIIIA). Neither product binds to the internal control region (ICR) of the 5 S rRNA gene, the normal binding site for Zn-TFIIIA. Furthermore, the adduct of Zn-TFIIIA with ICR is also reactive with Cd.sup.2.sup.+ and Pb.sup.2.sup.+, leading to the **dissociation** of the **DNA-protein** complex.
Cd-TFIIIA reacts with apometallothionein (apoMT) to form Cd-MT and apoTFIIIA. Similarly, Cd.sup.2.sup.+ and Zn.sup.2.sup.+ can be exchanged in the reaction of Cd-TFIIIA with Zn-MT. Zn-finger 3 of TFIIIA has also been examined to compare the reactivity of a single finger motif with fingers in the holoprotein. Zn-finger 3 reacts with much faster kinetics than the holoprotein.

L28 ANSWER 6 OF 10 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
ACCESSION NUMBER: 97:2167 AGRICOLA
DOCUMENT NUMBER: IND20539084
TITLE: Reverse two-hybrid and one-hybrid systems to detect **dissociation** of **protein-protein** and **DNA-protein** interactions.
AUTHOR(S): Vidal, M.; Brachmann, R.K.; Fattaey, A.; Harlow, E.; Boeke, J.D.
CORPORATE SOURCE: Massachusetts General Hospital Cancer Center, Charlestown, MA.
AVAILABILITY: DNAL (500 N21P)
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, Sept 17, 1996. Vol. 93, No. 19. p. 10315-10320
Publisher: Washington, D.C. : National Academy of Sciences,
CODEN: PNASA6; ISSN: 0027-8424
NOTE: Includes references
PUB. COUNTRY: District of Columbia; United States
DOCUMENT TYPE: Article; Conference
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English
AB Macromolecular interactions define many biological phenomena. Although genetic methods are available to identify novel protein-protein and DNA-protein interactions, no genetic system has thus far been described to identify molecules or mutations that dissociate known interactions. Herein, we describe genetic systems that detect such events in the yeast Saccharomyces cerevisiae. We have engineered yeast strains in which the interaction of two proteins expressed in the context of the two-hybrid system or the interaction between a DNA-binding protein and its binding

site in the context of the one-hybrid system is deleterious to growth. Under these conditions, dissociation of the interaction provides a selective growth advantage, thereby facilitating detection. These methods referred to as the "reverse two-hybrid system" and "reverse one-hybrid system" facilitate the study of the structure-function relationships and regulation of protein-protein and DNA-protein interactions. They should also facilitate the selection of dissociator molecules that could be used as therapeutic agents.

L28 ANSWER 7 OF 10 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1996:26117158 BIOTECHNO
TITLE: Activities of novel nonglycosidic epipodophyllotoxins in etoposide- sensitive and -resistant variants of human KB cells, P-388 cells, and in vivo multidrug-resistant murine leukemia cells
AUTHOR: Anyanwutaku I.O.; Guo X.; Chen H.-X.; Ji Z.; Lee K.-H.; Cheng Y.-C.
CORPORATE SOURCE: Department of Pharmacology, School of Medicine, Yale University,New Haven, CT 06520, United States.
SOURCE: Molecular Pharmacology, (1996), 49/4 (721-726)
CODEN: MOPMA3 ISSN: 0026-895X
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1996:26117158 BIOTECHNO
AB Previous structure-activity studies of the antitumor **compound** etoposide (VP-16) have suggested that replacement of the glycoside moiety could afford therapeutically active analogues with different biochemical determinants for cellular accumulation and drug resistance. In the present report, 10 analogues of VP-16 in which the glycosidyl moiety was replaced with alkyl or arylamino substituents exhibited 5-10-fold better binding affinity for topoisomerase II/DNA complex in human KB cells. A similar increase in the binding affinity was observed in an isolated-nuclei model. The analogues displayed greater or comparable potency to VP-16 in cell growth-inhibition studies and were less affected by cell membrane-associated drug resistance mechanisms, as exemplified by overexpressions of P-glycoprotein multidrug- resistance gene or multidrug resistance-associated protein. Interestingly, in animal studies, analogues least affected by the membrane transport- deficiency phenotypes exhibited low therapeutic index values, thus suggesting that highly efficient modulation of cellular membrane transport defects could perturb the selectivity of antitumor agents for cancer cells. This report also suggests a new method of quantifying drug-induced **protein** -linked **DNA** breaks by graphically determining the apparent **dissociation**-inhibition constant (K(di)) for the inhibitors.

L28 ANSWER 8 OF 10 LIFESCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 97:32443 LIFESCI
TITLE: Synthesis of the polycation thymidyl DNG, its fidelity in binding polyanionic DNA/RNA, and the stability and nature of the hybrid complexes
AUTHOR: Dempcy, R.O.; Browne, K.A.; Bruice, T.C.*
CORPORATE SOURCE: Dep. Chem., Univ. California, Santa Barbara, CA 93106, USA
SOURCE: J. AM. CHEM. SOC., (1995) vol. 117, no. 22, pp. 6140-6141.
ISSN: 0002-7863.
DOCUMENT TYPE: Journal
FILE SEGMENT: N
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Putative drugs consisting of oligonucleotide analogs capable of combining with RNA or DNA, thereby arresting cellular processes at the translational or transcriptional level, are known as antisense and antigene agents. The

backbones of viable antisense/antigene agents do not incorporate phosphodiester linkages because of the susceptibility of this linkage to degradation by cellular nucleases. To be effective, such agents must bind with fidelity to target nucleic acids via Watson-Crick and Hoogsteen base pairing. Since antisense/antigene agents must **compete** with specific oligonucleotides and **proteins** for RNA/**DNA** targets, it is desirable that these agents bind with high affinity to compatible RNA/DNA sequences. The stability of double- and triple-stranded RNA and DNA would increase if the electrostatic repulsion among the polyanionic single strands could be alleviated. This is seen in the enhanced binding of the neutrally charged peptide nucleic acids (PNA) to ssDNA. One might suspect, therefore, that a strand complementary to DNA and connected together by positively charged linkages would act as a particularly effective antisense/antigene agent since the repulsive electrostatic effects in dsDNA would be replaced by attractive electrostatic interactions. On the other hand, the electrostatic bonding between polycationic and polyanionic structures might be quite nonspecific and independent of complementary base pairing. We report herein the synthesis of the pentameric thymidyl deoxyribonucleic guanidine (DNG) 1 in which the phosphodiester linkages of DNA [-O(PO sub(2) super(-))O-] are replaced by guanidinium linkages [-NHC(=NH sub(2) super(+))NH-]. Preliminary results indicate that this DNG model **compound** exhibits complementary base pair recognition toward both RNA and DNA, and the double- and triple-helical structures composed of DNG with RNA or DNA demonstrate unprecedented stability. One should note that DNG is expected to be stable in vivo due to the absence of phosphodiester linkages.

L28 ANSWER 9 OF 10 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
DUPLICATE

ACCESSION NUMBER: 1995:25196363 BIOTECHNO
TITLE: The benzene metabolite p-benzoquinone forms adducts with DNA bases that are excised by a repair activity from human cells that differs from an ethenoadenine glycosylase
AUTHOR: Chenna A.; Hang B.; Rydberg B.; Kim E.; Pongracz K.; Bodell W.J.; Singer B.
CORPORATE SOURCE: Donner Laboratory, University of California,Berkeley, CA 94720, United States.
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1995), 92/13 (5890-5894)
CODEN: PNASA6 ISSN: 0027-8424
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English

AN 1995:25196363 BIOTECHNO
AB Benzene is a ubitiquous human environmental carcinogen. One of the major metabolites is hydroquinone, which is oxidized in vivo to give p-benzoquinone (p-BQ). Both metabolites are toxic to human cells. p-BQ reacts with DNA to form benzetheno adducts with deoxycytidine, deoxyadenosine, and deoxyguanosine. In this study we have synthesized the exocyclic **compounds** 3- hydroxy-3,N.sup.4-benzetheno-2'-deoxycytidine (p-BQ-dCyd) and 9-hydroxy-1,N.sup.6- benzetheno-2'-deoxyadenosine (p-BQ-dAdo), respectively, by reacting deoxycytidine and deoxyadenosine with p-BQ. These were converted to the phosphoamidites, which were then used to prepare site-specific oligonucleotides with either the p-BQ-dCyd or p-BQ-dAdo adduct (pbqC or pbqA in sequences) at two different defined positions. These oligonucleotides were efficiently nicked 5' to the adduct by partially purified HeLa cell extracts- the pbqC-containing oligomer more rapidly than the pbqA-containing oligomer. In contrast to the enzyme binding to derivatives produced by the vinyl chloride metabolite chloroacetaldehyde, the oligonucleotides up to 60-mer containing p-BQ adducts did not bind measurably to the same enzyme

preparation in a gel retardation assay. Furthermore, there was no competition for the binding observed between oligonucleotides containing 1,N.sup.6-etheno A deoxyadenosine (1,N.sup.6-etheno-dAdo; εA in sequences) and these oligomers containing either of the p-BQ adducts, even at 120-fold excess. When highly purified fast protein liquid chromatography (FPLC) enzyme fractions were obtained, there appeared to be two closely eluting nicking activities. One of these enzymes bound and cleaved the εA-containing deoxyoligonucleotide. The other enzyme cleaved the pbqA- and pbqC-containing deoxyoligonucleotides. One additional unexpected fact was that bulk p-BQ-treated salmon sperm DNA did **compete** effectively with the εA-containing oligonucleotide for **protein** binding. This raises the possibility that such **DNA** contains other, as-yet-uncharacterized adducts that are recognized by the same enzyme that recognizes the etheno adducts. In summary, we describe a previously undescribed human DNA repair activity, possibly a glycosylase, that excises from DNA pbqC and pbqA, exocyclic adducts resulting from reaction of deoxycytidine and deoxyadenosine with the benzene metabolite, p-BQ. This glycosylase activity is not identical to the one previously reported from this laboratory as excising the four etheno bases from DNA.

L28 ANSWER 10 OF 10 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
DUPLICATE

ACCESSION NUMBER: 1993:23335475 BIOTECHNO
TITLE: Fluid membranes with acidic domains activate DnaA, the initiator protein of replication in Escherichia coli
AUTHOR: Castuma C.E.; Crooke E.; Kornberg A.
CORPORATE SOURCE: Biochemistry/Molecular Biology Dept., Georgetown University Medical Center,Washington, DC 20007, United States.
SOURCE: Journal of Biological Chemistry, (1993), 268/33 (24665-24668)
CODEN: JBCHA3 ISSN: 0021-9258
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1993:23335475 BIOTECHNO
AB Acidic phospholipids in a fluid phase **dissociate** ADP or ATP tightly bound to DnaA **protein** and, in the presence of ATP and **DNA**, can restore an inactive ADP form to full activity (Sekimizu, K., and Kornberg, A. (1988) J. Biol. Chemical 263, 7131-7135). Further studies of the interactions between DnaA protein and lipids have used two functional assays: 1) release of ADP or ATP from DnaA and 2) DNA replication upon rejuvenation of an inactive ADP-DnaA protein complex. Among a variety of phospholipids tested were pure synthetic **compounds** and the mixtures from Escherichia coli auxotrophs (fabA), which are unable to synthesize unsaturated fatty acids and can be supplemented with different acyl derivatives. Fatty acid composition was determined by gas- liquid chromatography and membrane fluidity by fluorescence spectroscopy using 1,6-diphenyl-1,3,5-hexatriene as a probe. Lipid requirements of DnaA protein were shown to be: 1) phospholipids in a fluid phase (i.e. above the transition temperature), 2) a charged polar head group, 3) a lamellar phase (i.e. hexagonal II structures were inactive), and 4) a certain degree of fluidity imparted by the fatty acids esterified to the glycerol backbone. This conclusion was based on the incorporation of: 1) cholesterol, known to increase the packing of lipids, or 2) a branched fatty acyl derivative, which exhibits a fluidizing effect similar to that of a cis double bond. Both agents demonstrated that membrane fluidity is required for DnaA protein function in vitro, consistent with early studies of chromosome initiation in growing cells.